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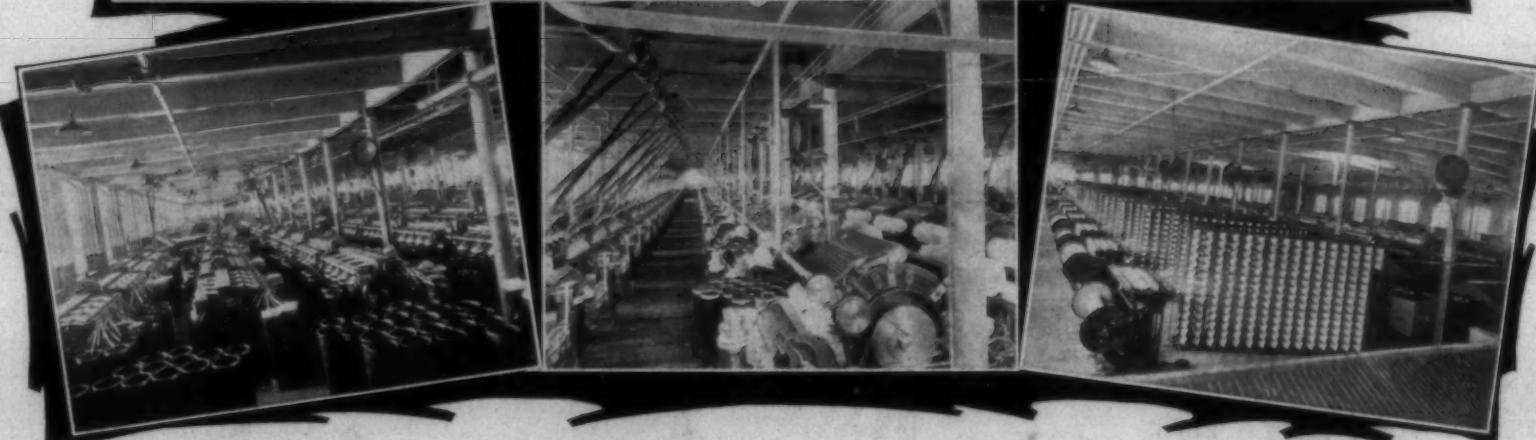
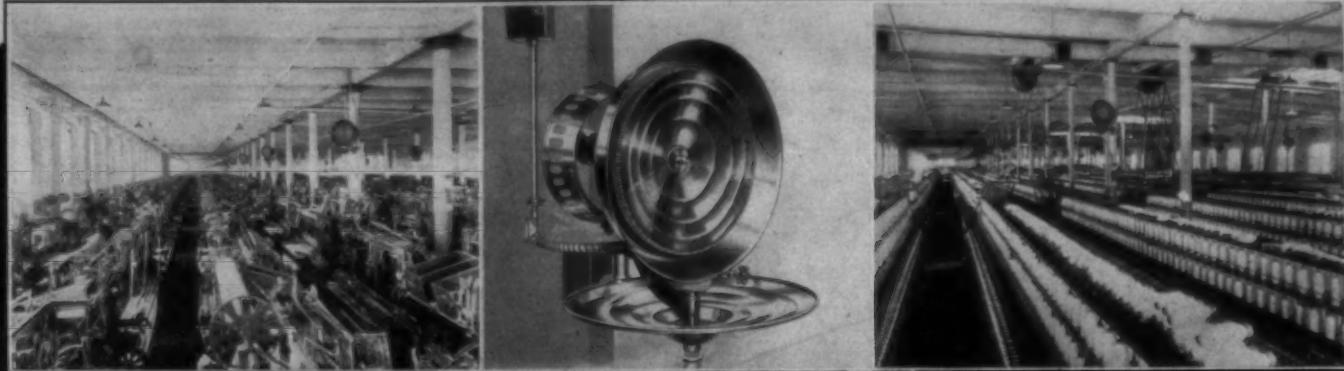
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SOUTHERN TEXTILE BULLETIN

VOL. 32

CHARLOTTE, N. C., THURSDAY, AUGUST 4, 1927

NUMBER 23



A vista of the Bahnson Humidifiers installed throughout the plant of Fisher Manufacturing Company, Fisherville, Mass.

BAHNSON HUMIDIFIERS will solve your humidifying problems efficiently and economically. Maximum efficiency, Dependable Automatic Humidity Control, Economy of Operation,— you get them all in a BAHNSON SYSTEM.

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Humidification Engineers

Winston-Salem, N. C.

New York Office: 93 Worth Street



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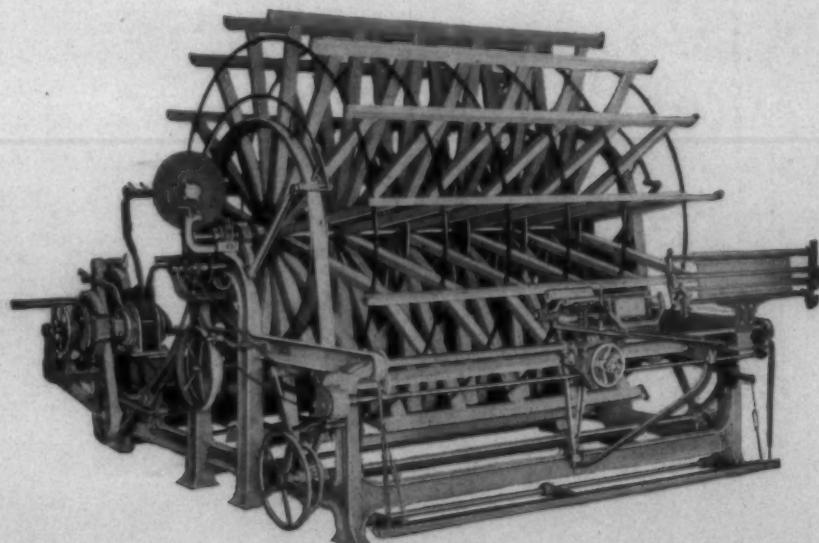
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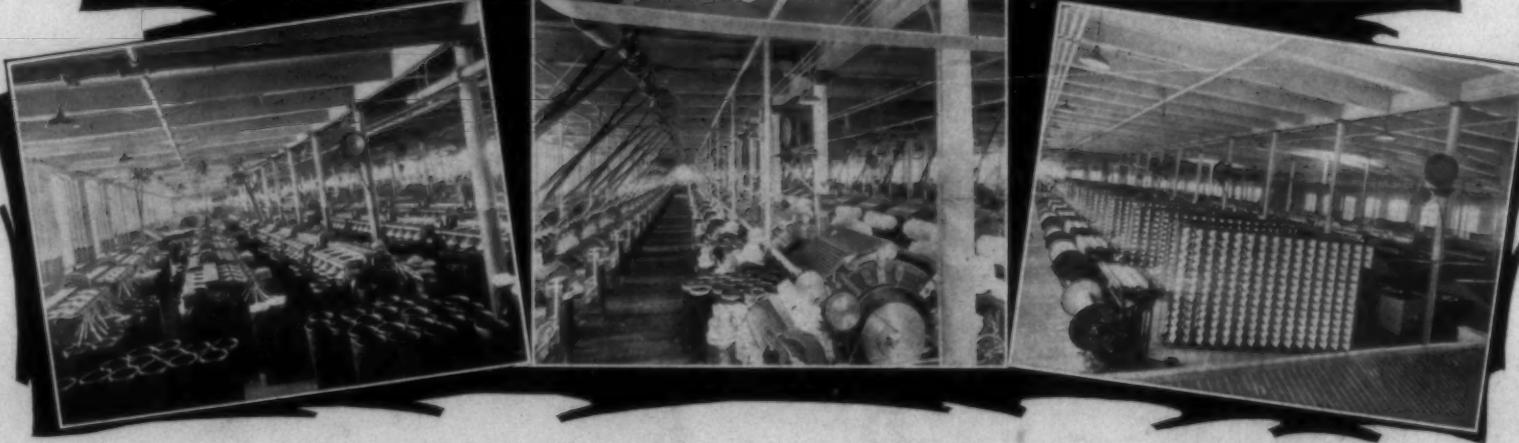
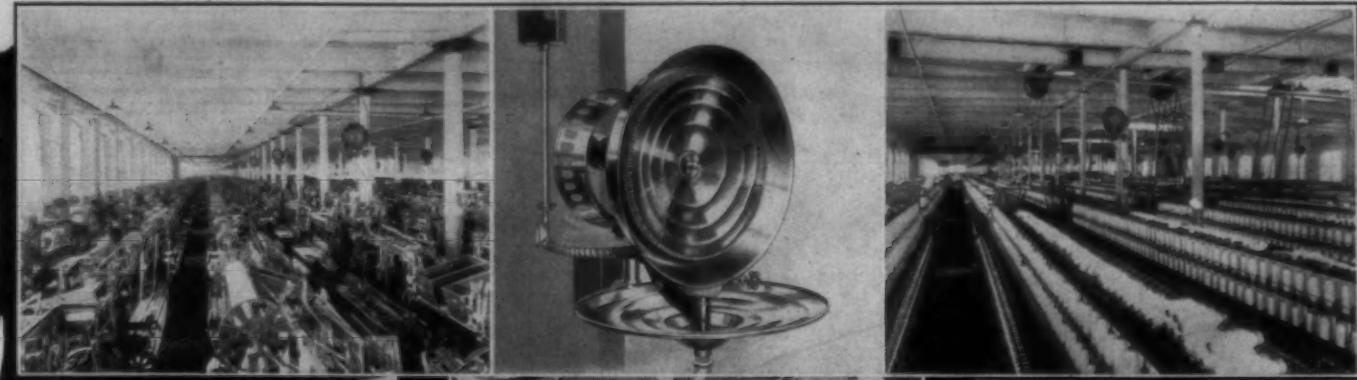
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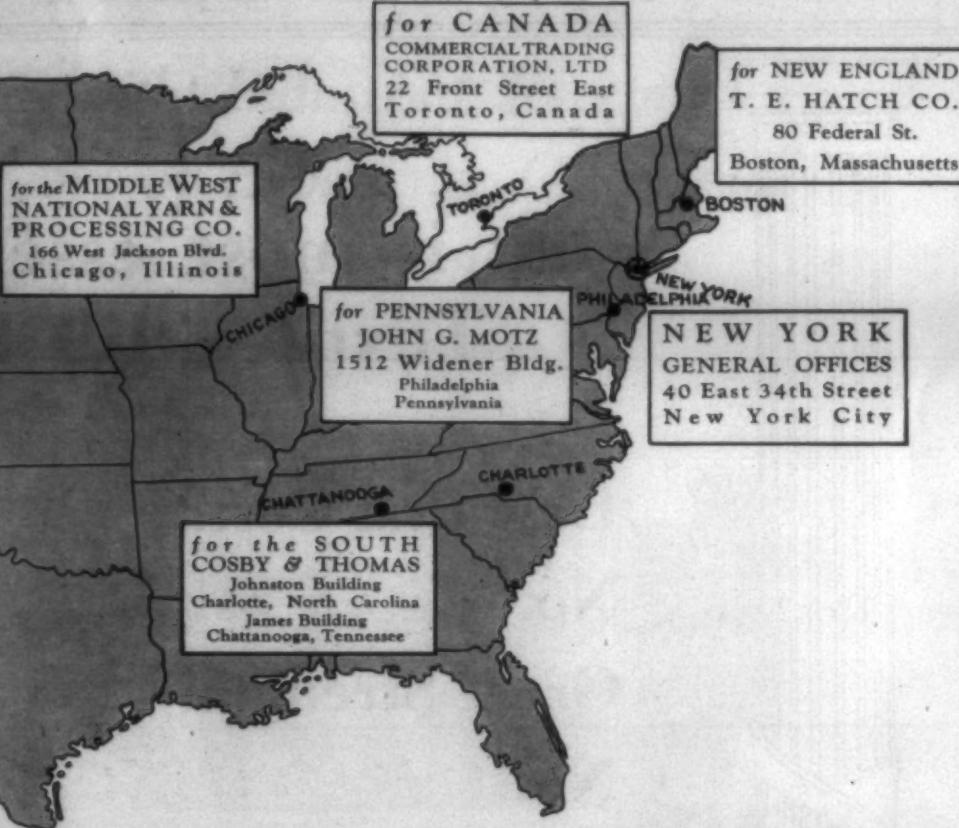
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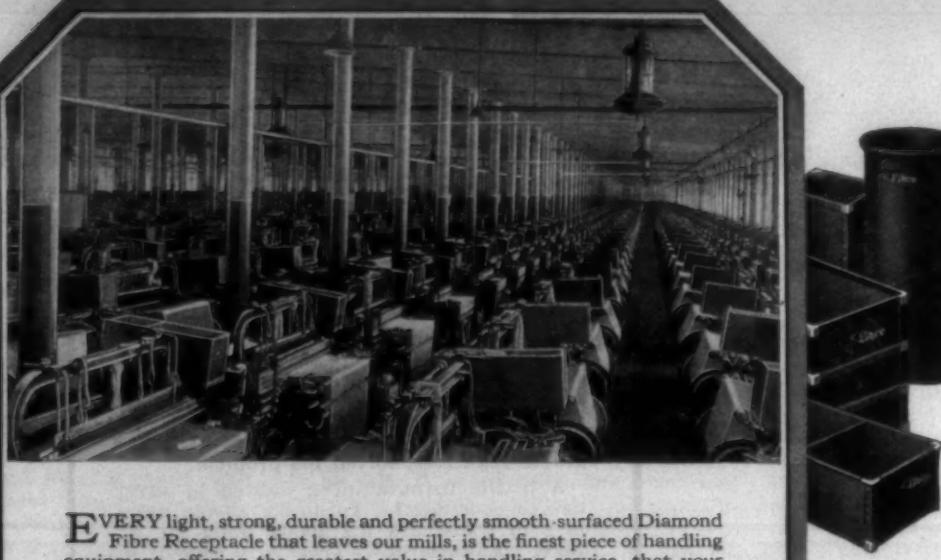
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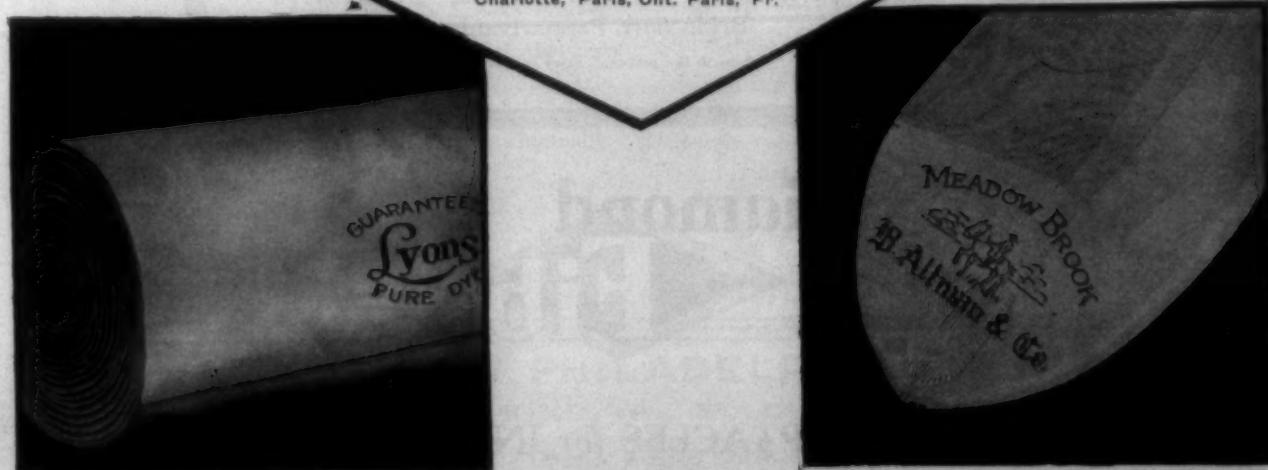
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VOL. 32

CHARLOTTE, N. C., THURSDAY, AUGUST 4, 1927

NUMBER 23

Watching The Other Fellow Work

I HAVE often heard that it is the little things, and not the big ones, that count. Since seeing a few little things done and the results obtained by a small amount of additional work required, I most heartily agree with the fellow that first conceived the idea. If some of those who have to cover a floor space of two or three acres every day would stop congratulating ourselves upon the size of our jobs and get out now and then to see how some of the men in the smaller mills are doing things, there are few of us who would not learn something that would open up a way to better results. I guess I would still be plodding along in the same old way, congratulating my boss upon the efficient superintendent he had if I had not decided to spend a short vacation visiting some of the other mills. I do not feel my importance so much now. I have learned a great deal and have found that I didn't know it all.

I recently had an opportunity of spending a week with my good friend Bill, superintendent of a smaller mill than I am running. Bill is a fine fellow, always willing to lend a hand and is not afraid to ask or answer questions. He keeps right up to date by keeping just a little ahead of the other fellow.

I slipped into Bill's opening room a little after starting time on Monday morning while the overseers were placing the help. I was not there long before Bill found me and told me to make myself at home. He said:

"I know something must be badly wrong, as I never heard of you getting around to see the other mills."

He was right.

I was glad I got there on a Monday morning and started in at the opening room, as I learned a great deal in the half day that I spent around the vertical openers.

To begin my account of what I saw at this mill, the first thing that attracted my attention was a little guy who came in wearing a pair of nice clean overalls and a well laundered jumper. He carried a memo book and a pencil in his pocket and a couple of good-sized oil cans in his hands. He introduced himself as the boss carder and the way he began giving orders proved that he was not exaggerating his position in the least. In fact he was about the biggest little fellow I ever saw. His first act was to give the two oil cans

to his opener room men and the way they went to work showed they knew the rest.

"Now see," he said, "we pride ourselves upon the fact that we have never had a bearing to burn out on these machines since they were installed and have never had but one fire and that was caused by a small stone in a bale of cotton and not from a dry bearing. We can have such a condition only by being sure that our machines get plenty of oil at least once a week, especially the fast moving parts. We have all oil holes cleaned out thoroughly on Saturday and I personally see that they get a good oiling with the right oil before they are started on Monday morning. This not only keeps bearings and shafts from wearing, but reduces friction and lowers power costs."

"That is true," I remarked, "but can't you trust your men to oil the machines they run?"

"Probably so," he replied, "but we wouldn't know for sure that it was done."

The moral seems to be to take nothing for granted.

Cleaning Cotton Bales.

The next thing that attracted my attention was an old man, with a peg leg and a hunch back, who was working on a bale of cotton outside the opener room. He was using an air hose and a wire brush. I asked the carder what he was supposed to do, but before he could answer, I noted that the old man began to blow and brush the exposed sides of the bales.

"That man," said the carder, "is one of our most important fixtures. We created that job for him because he has six good hands in the mill who never give us any trouble, but after we realized the benefits from his work, it became a permanent process. His work is to go over every bale of cotton as it comes in and get rid of every bit of dirt such as sticks, straw, leaf, gravel and anything else that might have collected against the sides of the bales. You know that if that stuff goes into the bales, some of it will not be knocked out. We also find that this work gives us cleaner roving and yarns and the work runs better."

I agreed that it was a good idea. Why put dirt in the machines with

By the Visitor.

the cotton when you are trying to get it out,

Real Mixing.

I went back to watch the man put the cotton on the traveling aprons to the vertical openers. I found eight bales opened in front of the machines which filled up all the space they had, and in looking over the list I found two bales each of the following grades: Strict middling, middling, strict low middling and low middling. I noticed that they were very particular how it went into the machines. The strict middling and middling was run through Machine No. 1 and the other two grades through Machine No. 2. The operator took the same amount from each bale every few minutes and put it on the aprons, taking pains to make the whole eight bales give out at the same time. As the machines fed the cotton to a traveling apron, they were certainly getting a better mixture than could have been obtained in the usual way of mixing it in a pile. I also noticed that they had several bales of very dirty cotton that they were giving a good cleaning through a special machine before feeding it to the vertical openers. I watched them clean a bale and weigh the dirt and leaf taken out. By the time they got through cleaning it they didn't have very much cotton left, but what they had looked clean and would not lower the quality of the yarns.

My friend Bill came up while this was going on, and seeing me interested, says:

"You see, we use our opening room for cleaning purposes. We are not particular how the dirt gets out of the cotton so long as it gets out. While some mills depend entirely on their vertical openers and pickers to do this, we don't, as we have found that all the dirt we can dispose of before it goes through the regular process not only gives us an idea of what we are buying, but we are sure that none of it gets into the work."

Removing Waste.

By the way, I was about to forget to mention how they put their waste back into the work. I consider this one of the most important things I saw. The layout of the outfit was only a regular automatic feeder with a pair of regulating

cones added so that the feed could be regulated by shifting the belt anywhere on the cones and also by varying the space between the doffer and vertical apron, which makes it possible to feed the waste fast or slow, heavy or light. They keep the feed regulated so that the machine runs all the time that the vertical opener runs, which puts the same amount of waste in all the work and is much better than using it spasmodically or trying to mix it evenly in a pile of cotton. Before the roving waste and scavenger balls from the spinning room is used it is run through the thread extractor and roving waste machine and broken up. I was about to fail to mention how often they clean out from under the vertical openers and breakers. Cleaning out from under the opening and picking machinery is usually done the first thing every morning and before starting up after dinner in the majority of the mills. But this is just half the amount of cleaning the mill does. They claim that they had watched the mote boxes and when using some lots of cotton they would fill up before the time to clean out, which kept the motes and dirt from dropping through the grid bars, but stayed in the cotton. This put me thinking, so when I got back home I watched my machines and found some of them would fill up a good while before time to clean out. Since looking into the matter I find that they really would run all the time without ever being cleaned, and some of the picker men have found it out, too. I am not going to take anything for granted from now on, as I have found out that it pays to be sure.

Clean Picker Room.

From the opening room I went up in the picker room, located on the third floor, which is the only objection I could find to the room. I reached this department before they started up after the noon hour and found them cleaning the motes from under the machines, and also cleaning the cotton out of the cages. They didn't pull the motes out of the machines and let them lay on the floor part of the evening, which is the usual way it is done, and they didn't throw the lint and dirt they took out of the cages on the floor, either. They were just as up-to-date in this department as they were in the opening room. System

(Continued on Page 10)

Health for the Business Man

(Radio talk of Dr. Eugene L. Fisk)

I HAVE been asked to say something helpful to the mature business man who thinks he is tired and the young man who is afraid that some day he is going to be tired.

The terms "tired" and "fatigued" may be misleading in that they imply an excess of work. As a matter of fact, fatigue is a symptom with many possible causes other than mere work.

In cases where a man reports that he is "all in" at the end of the day or the week, it is necessary to ask the question, "Is the man tired because he is ill or ill because he is tired?" In by far the greatest number of cases we will find that the man is tired because he is ill.

Just as it is impossible to strain a perfectly healthy heart by physical exertion of exercise, so is it impossible to strain the brain and nervous system of a perfectly healthy man by hard executive work in an ordinary working day.

So far as the work itself is concerned, it is not so much the quantity of work as the method of doing things that counts. If a man's work involves the assumption of heavy gambling risks, and intense anxiety and worriment are added to the factor of mere executive labor, a breakdown may come from these combined factors. Yet even in such cases an unpoisoned body and sound organs will carry a man pretty far.

I think it is important to have this point of view because if in conditions of depression and fatigue and a consciousness of inability to tackle work in a spirit of "pep" and ambition, reliance is placed upon mere rest or vacations or mitigation of the strain of work, apparent improvement may take place but the underlying condition of disease or disability that is really responsible may be overlooked.

The fundamental protective measure, therefore, for the business man of any age, if he wishes to prevent that tired feeling or that actual condition of inefficiency, is to have his body and his life examined and all the facts brought to the surface. It may be discovered that there is no physical disability but that he is doing the wrong kind of work or only one kind of work. It has been well said that no man can over-work who does two kinds of work: one by which he earns a living and the other by which he finds self-expression—something in the nature of afad or avocation.

I know a man who gets a tremendous "kick" out of studying the gravestones in the cemeteries of the towns that he visits. This probably would not be a good avocation for an undertaker, but in this particular instance it affords a certain psychic balance to the strain of the daily grind by which the man earns a living.

The mental relaxation and stimulus of knowing a little more about some particular subject, or doing a little more in some particular field outside of business, than the aver-

age man, affords both stimulation and relaxation that balances the work for salary or wages.

Just what is the risk that the business man runs by neglecting these precautions? Is it worth while to bother the business man on a Sunday afternoon and call his attention to these calamities which may assail him if he neglects to govern his business of living according to the same principles that he adopts in governing his own commercial business?

In the first place, the work span of life is altogether too short. Just as the average successful man reaches a period of high development in his chosen field, he has to pass it on to somebody else and much of the building work is done over again along new lines. This is sometimes fortunate. However, if we could retain the experience, judgment, and sense of proportion of the leaders in business for an average of ten or twenty years longer than is now usual and at the same time keep such men in a state of health and flexibility, receptive to new ideas and methods, and with the vigor to put them into practice, surely society would be better off and these men would have a more abundant and satisfying existence.

I am not going to weary this audience with complicated statistics, but a few figures will show the enormous life waste that occurs at the present time from failure to take these elementary business precautions of having periodic biological audits. Perhaps this high-sounding term will appeal more forcibly to the business man than the commonplace one of a health examination. After all, the word "audit" is a good one to describe the evaluation of the essential factors in the body and the life of a human being. In the United States Registration Area there occur annually about 1,200,000 deaths. Throwing together the deaths from diseases of the heart and circulation, tuberculosis, cancer, apoplexy, kidney trouble and diabetes, we have, for the country at large, an annual loss of about 700,000 lives.

Leading specialists in the treatment of these different types of disease have testified that the most important measure that can be taken in reducing the death rate from these maladies is the periodic health examination. Even in the case of cancer, where the actual cause is unknown, the early detection of this disease by means of periodic health examinations will enable many lives to be saved by prompt operative treatment. Also there are conditions that predispose to cancer that could be detected and corrected. With all the facts on the table as to the bodily condition and important factors in the life of an individual, it is possible to go ahead and apply in an individual way the fundamental rules of hygiene.

Premature physical breakdown, old age, and the incapacities that assail men in later life are not preordained conditions arising without

cause. Hereditary predisposition is an important factor; hence the importance of choosing one's ancestors wisely! Nurture and hygienic government of a life can, however, do much to defeat heredity. Most important is the prevention of infections or the eradication of centers of infection in the body. Fresh air, sunshine, and adequate use for our more than three hundred pairs of muscles, are sadly needed in the lives of most business men. This is an age of push-buttons and mechanical labor-saving devices. Rather desperate efforts are necessary to stem this trend toward muscular stasis. A set of chest weights in a business man's office, resorted to occasionally when he feels stale and apathetic, or, better still, used regularly before noon and in the afternoon, would do a lot to prevent muscular apathy and degeneration with its attendant evils.

Also the sedentary worker must fight over-indulgence in food and overweight. It is not the quantity of food that counts, but the type of food that is eaten. The average case of overweight, due to decreasing muscular exertion and increasing or unchanged food indulgence, can be readily corrected; not by strenuous gymnastic work which may overstrain a fat-encumbered heart, but by limiting the fat-forming foods, such as bread and butter, fat meats and sweets, and specializing more in the bulky foods, such as green vegetables and fruits.

I have referred to the fact that it is not so much the quantity of work that induces fatigue. This principle may be applied to the entire range of mental activities. We are often warned against the evil effects of anger. This applies particularly to men with high blood pressure or heart trouble. But I am of the opinion that an occasional emotion outburst through righteous indignation is not harmful to anybody but rather improves the condition of the endocrine glands. Prolonged grouchiness, ill humor, and states of tension, however, are harmful to anybody. Hence, as a general principle, serenity is urged as the basis of mental hygiene. Every good thing can be carried to excess—even water drinking—and so serenity may often be abused and states of repression arise from failure to occasionally have an emotional release. A man who runs his business in an emotional way, however, with continual outbursts of faultfinding and anger, would do well to have one of these biological audits and find out whether these manifestations arise from some physical disability or from exaggerated mental defense reactions.

As a man reaches the later decades of life, it is increasingly important to have these audits. Many a useful business career might be extended not only by the removal of disabilities but by judicious adjustment of working methods—perhaps longer and more frequent vacations after one is assured that everything else has been attended to. Complete

retirement from business is a dangerous thing for any man unless it is necessitated by complete inability to take business responsibility of kind. Most men soon begin to fade when they have no important decisions to make and no one looks to them for guidance in important affairs in the fields where they have spent their lives in useful labor.

Let me close this discussion with the expression of a strong opinion that work is the greatest stabilizer of health that we have. It is better to equip oneself to meet it than to run away from it. Retirement should not be the goal of a man's activities, but rather a prolongation of his working period, when he can feel that he is really in the game and not a mere observer on the side lines. This working period could, I am sure, be prolonged ten or twenty years on the average by the simple methods of biological audits or periodic health examinations and reasonable cooperation in accepting the counsel based upon them.

Wool Effects On Cotton

Cotton is sometimes treated with nitro cavid in order to impart characteristics resembling wool in appearance, handle, and the manner in which it absorbs dyestuffs. The main objections to the treatment are that it weakens the fibres, makes them sensitive to alkalies, and causes unevenness of color on account of easy absorption of dyes.

It is proposed by the Swiss firm of Heberlein & Co., to denitrate the goods after nitration by subjecting them to treatment with solutions of sulphides or hydrosulphides of alkalies in a similar manner to that employed in producing artificial silk from nitrate of cellulose. The treatment reduces the affinity of the fibres for dyestuffs to a normal degree, removes its sensitiveness to alkali, and increases its resemblance to wool. Treated fibres may be dyed uniformly and with vat dyestuffs and the wool effect will not be influenced by an alkaline boil, so that it is possible to remove the yellowish tint imparted by the acid treatment by an after bleach and thus obtain a full white. The resistance to alkali improves the fastness of the treated goods to washing. The process is described in B.P. 258598.—Dyer and Calico Printer.

Dies in Mill

Sam L. Pettus, aged 28, a section hand in the spinning room of Groves Mill No. 1, Gastonia, fell from a ladder on which he was working Thursday morning and was dead when his companion workers reached him. He was engaged in lacing a belt at the time.

An eye witness said that the young man toppled off the ladder and struggled a bit after hitting the floor beneath.

It is thought that death was due to heart failure or a stroke of apoplexy. There were no bruises or broken bones in the body.

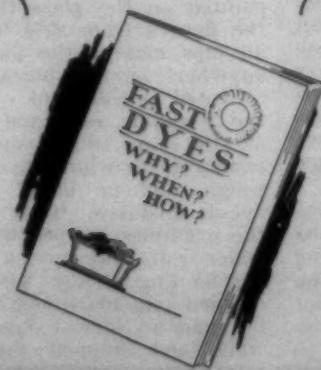
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One significant phase of this new leadership is the common recognition among progressive manufacturers of the growing consumer demand for fast-dyed fabrics. More fast-dyed fabrics are produced today than ever before.

On April 11th, the United States Tariff Commission published a preliminary report on the Census of Dyes which gives the production of vat dyes (excluding Indigo) as 4,000,000 pounds, as compared with 2,600,000 pounds in 1925—an increase of 53%. Production in 1925 was, in turn, an increase of 43% over the 1924 figure. The consumption of vat dyes in this country has therefore more than doubled in these three years. These are government figures—not the estimate of any individual manufacturer.

"The increase in domestic production (of fast colors) is of interest to every consumer of fabrics," comments this preliminary report, "as indicative of the pronounced trend toward a greater use of fast dyes."

Is your business keyed to this new trend?

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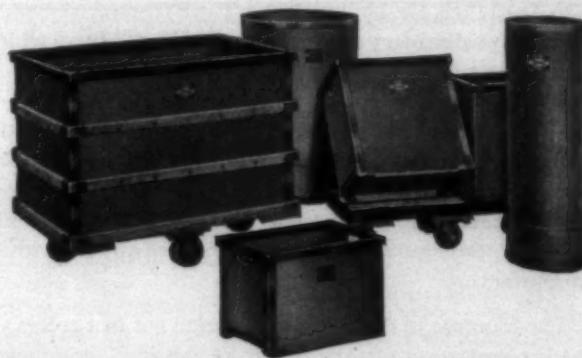
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Watching the Other Fellow Work

(Continued from Page 7)

seems to be the watchword. They certainly were obeying some of the signs they had tacked up on some of the posts which read, "Help keep this place safe and clean," and instead of throwing dirt on the floor to get mixed up with the good clean cotton, they put it in boxes and carried it right out. I didn't see any dirty places or corners with any kind of rubbish anywhere in the room and very little cotton on the floor. I noticed that the breakers had knock-off gears on them, which is unusual, especially in mills where the machines are pushed for production. They weighed a lap from each of the breakers once in the morning and the same in the evening and any variation from the standard weight, which was 50 pounds, was corrected. I didn't ask any questions, but when I got back home I had gears put on my machines and weighed several yards from each machine and I found them varying from 15 to 30 ounces per yard. Now, common sense teaches that machines making laps weighing 30 ounces per yard is not going to clean the cotton near as well as those making laps weighing 15 ounces per yard. So I still have my knock-off gears on the breakers and weigh some of the laps every day. Not only do they keep up better but my cone belts on the finishers doesn't shift about near as much and I am getting a more even lap and am not running over near as many laps as I did.

I was next attracted to the automatic distributor, which keeps the hoppers supplied with cotton. I expected to find them partly covered up with cotton, but was agreeably surprised to find no cotton on the floor. They had them regulated so that the hoppers never get lower than half full, and not more than three-fourths full, which accounted for no cotton being on the floor. Keeping so near the same amount of cotton in the hoppers all the time also kept down the variation in the weight of the laps.

The next in line of importance was the lapping of the aprons. One man was supposed to look after the fronts of the breakers and another man was supposed to keep the laps on the aprons. They had formed a partnership and by agreement between themselves they were working together. When the laps had to be doffed off the breakers one of them pulled the pins and the other put the laps on the truck, and when they put a lap on the apron one man carried one end of the lap and one the other. This made it quite easy to put on a new lap without tearing it and making a lot of waste, besides it was just as easy to splice the two just enough to avoid a light place in the finished lap.

I thought I had found something wrong when I noticed the cone belts running much nearer the small end of the driving cone instead of being in the center, but fortunately what I had already learned kept me from giving myself away. But I had to find out the reason and didn't lose any time in asking why it was done.

So they told me that they had seen two laps run off the apron at once which required a very drastic change in the position of the cone belt, but they had never seen the men running the machines with two extra laps on the aprons. So if I looked as cheap as I felt they must have thought I was just starting in to learn the business.

Slow Beater Speed.

I next turned my attention to the beaters on the finishers, as these are the most particular machines in the picker room, which require the most accurate setting. I was very anxious to see how far behind the times I was running with my machines. I got permission to stop a machine, and then I got busy and gauged the distance the beaters were set from the feed rolls. I also measured the length of the staple of the cotton. I found the cotton averaged about one inch and the beaters were set to within one-quarter of an inch of the feed rolls. Fortunately, I had my speed indicator with me and I took the speed of the beaters and also the fans. The beater was of the two-blade type and was only making 1,080 revolutions per minute. The machine was making an extra nice lap. I unrolled several yards of one of them and held it up to the light and found it as near perfect as I thought it possible to get it. I couldn't understand why these beaters were run so slowly when the recommended speed is from 1,300 to 1,450 revolutions per minute. But I found out after learning what the draft of the machine was, and the time required to make a lap, that they were up-to-date here also. They were keeping the beater speed in the proper relation to the feed of the machine, and the cotton was getting the right amount of beating, which is 60 strokes per inch. Some people do not pay any attention to this, which is wrong. Common sense ought to teach that cotton being hit every sixtieth of an inch is getting all the beating it needs no matter how dirty it may be, especially with the beater set so close to the feed rolls. I have come to the conclusion that instead of changing the feed pulley when more laps are needed, the speed of the whole machine should be changed, as this keeps the beats per inch of stock the same.

Before leaving the picker room I stayed a while with the finishers, and they certainly were running their job up-to-date. They had the scales marked at the figure 40, which was the standard weight for the laps. There was a black space painted on the glass that covered the figures from $39\frac{1}{2}$ to $40\frac{1}{2}$, and all laps making the painter stand anywhere on this black spot were accepted as good laps. This makes the weighing easy and quick and at the same time keep everybody posted as to what the laps should weigh, and no doubt very often avoids mistakes. They had one of the machines stopped with the calender rolls out, giving it a good overhauling. They claimed they cleaned two machines every week, but had no special days to do the work and stopped the machines after they were sure they had

(Continued on Page 34)

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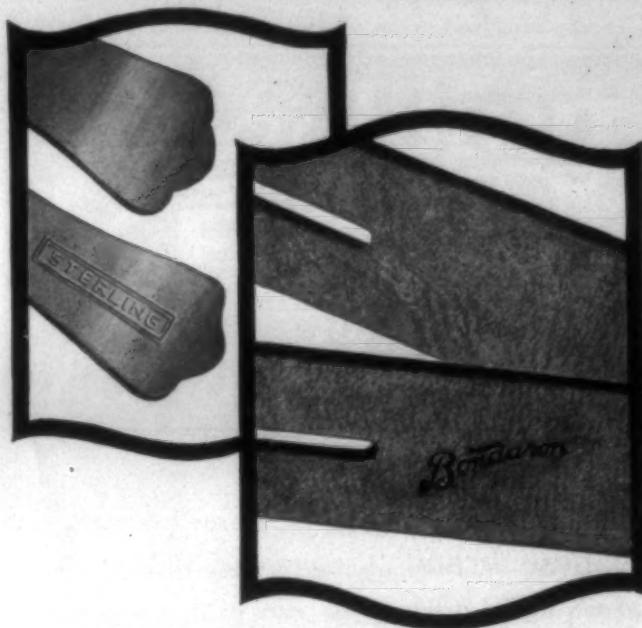
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Leaving the hair on an ordinary check strap doesn't any more make it a *Bondaron Check Strap* than the addition of a suit of clothes makes a man out of a monkey. Without the mark "Sterling" to guide them, the purchaser of silverware would be unable to distinguish the unreal from the genuine.

Plated silver looks so much like sterling silver that from the standpoint of the *appearance* there seems little to choose between them. Ordinary check straps with the hair on so closely resemble the product bearing the name "Bondaron" that the eye one check strap may *seem* to be as good as another.

But appearances are deceiving—"all is not gold that glitters"—and the army of "just as good" merchants leaves nothing but dissatisfaction in its train. When a jewelry clerk shows you silverware you look for the name "Sterling" before you buy. When a mill supply man offers you check straps insist on seeing the name Bondaron. Unless the name is there you won't get the genuine—and if you don't get the genuine you *can't* get Bondaron service.

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Dyeing of Artificial Silks

THE following is an abstract of a paper read before the Convention of Canadian Chemists, by Dr. M. Brot, Grenoble University, France.

Before examining the practice of dyeing, we recall in a few words the main features of dyeing theory. Dyeing is the result of a combination between the coloring matter and the fibres. According to other chemists, it is the result of an "adsorption" or a solution by the fibres, of the coloring molecules. Animal fibres have generally an affinity for coloring matters. Vegetable fibres have but a weak affinity for colors. Among these vegetable fibres are artificial silks, such as viscose, Lehner silk, copper silk, etc., formed of cellulose and hydro cellulose. Viscose, which has been submitted, as the mercerized cotton, is a strong alkaline treatment, has a little more affinity, for basic colors (such as Auramine, Fuchsine, Rhodamine) but this affinity is not sufficient for dyeing. Cellulose fibres can be dyed by basic colors, only after a preliminary treatment by a mordant such as tannin, alumina, etc. Many direct colors for cotton and cellulose have been discovered. Benzidine dyestuffs have an affinity for cotton and for artificial silks of cellulose, also sulfur dyestuffs. Insoluble coal tar dyes can be produced on the fibre and specially the azoic colors. More generally all molecules which contain the NH group can be treated by nitrous acid (ice colors) and by n amine or phenol. The development gives a fast color on the fibre. The case of aceto silk is quite different. Aceto silk is a cellulose ester and the coal tar dyes commonly used have no special affinity for that ester. We shall examine how it was possible to dye this aceto silk which is known as Celanese silk or Rhodiaseta silk or Tubize silk.

A—Dyeing of Viscose and Cellulose Silks.

Actually the eighty per cent of world production of rayon is viscose and, therefore, the dyeing of viscose is very important. Silks such as Chardonnet, Lehner, Copper silks are cellulose or hydro-cellulose silks and the processes of dyeing these silks are about the same as for viscose. All the processes used for dyeing cotton are good for dyeing viscose. By the far the most important dyestuffs for viscose are direct colors, corresponding to the 70 per cent of color consumption for viscose.

Colors obtained by development on fibre are also used for viscose (ice colors). Usually the developers are Betanaphthol, Resorcin, metatoluylen diamine, theyl betanaphthylamine. Sulphur colors, also give very good results with viscose. The resistance of viscose to hot alkaline baths has been found satisfactory.

Vat colors for viscose are used to obtain fastness to light, to acids, to chlorine. The Indigoid class as well as the anthraquinone class of vat colors give very good results.

These colors have some affinity

for viscose but this affinity is not strong enough for regular dyeing.

B—Aceto Silk Dyeing.

We have now to examine the special problem of aceto (celanese dyeing). This silk is much more resistant to water absorption than viscose. Its structure is a colloidal one. From the x-ray examination the structure of viscose as well as the structure of cotton seems to be a crystalloid one. The resistance against water absorption increases the difficulty of dyeing this silk. We shall try to summarize all the work which has been done to solve this problem.

(1) Some chemists have tried to dye in alcoholic solutions or acetic acid solutions with dyestuffs insoluble in water.

(2) Aceto silk is easily impregnated with anilin, amines (Knoll 1907) and with nitrous acid and phenol, azoic dyestuffs are formed in the fibres.

(3) By saponification of cellulose ester by alkali, such as weak caustic, lime water, etc., the surface of fibres become able to dye with direct colors (Mork 1910).

(4) With basic dyestuffs, some results have been obtained, but the use of mordants was necessary. Tannin, metallic salts and specially zinc salts were used.

(5) The researches of Clavel and his collaborators have brought to light the influence of the SOH groups upon the solubility and affinity. The old COH group is favorable to affinity.

(6) Acid dyestuffs have some affinity for aceto silks specially azoic dyestuffs—with one sulfonic group only—and with the amino groups (British Dyestuffs—B.P. 1923).

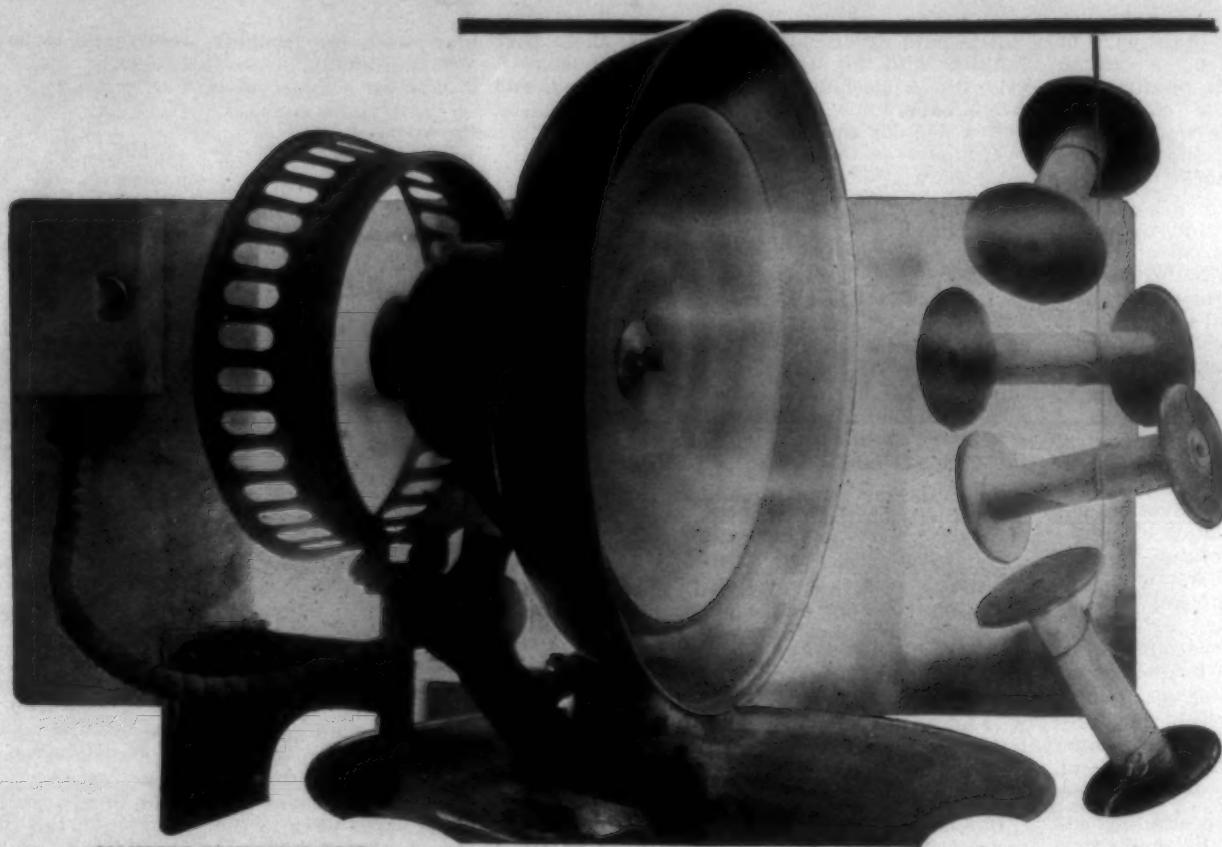
(7) Green and Saunders (1923) succeeded in putting insoluble azoic dyestuffs in water solutions. They called these dyestuffs Inonamines.

In water solution, hydrolysis occurs and the free base combines with aceto silk. Some of these ionamine dyestuffs are not fast to light and to acids.

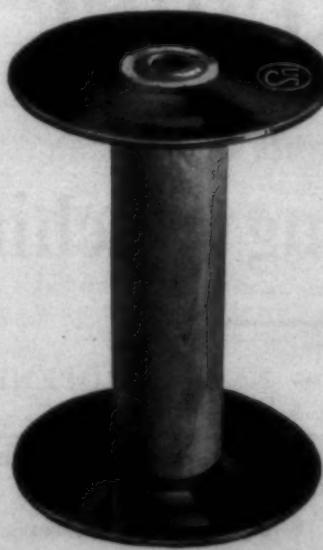
(8) The British Dyes Co., discovered at the same moment, amino-anthraquinone dyestuffs, with affinity for aceto silk.

(9) The Scottish Dyes Limited discovered the dyeing of celanese and aceto silks with colloidal suspensions of all kinds of insoluble dyestuffs. Amino anthraquinone derivatives are specially fitted for this dyeing process. For instance the S. R. A. dyestuffs, in paste, of the American Cellulose and Chemical Co., New York, are insoluble coal tar dyes suspended in sulfuricinoleic acid. The B.D.C. colors (British Dyes) are suspended in Neradol (naphthosulfonic acid and formaldehyde). These colloidal suspensions according to the Kartaschoff experiments are attracted by aceto silk. A solid solution takes place. This new process is a revolution in the theory of dyeing, and the chemists now can easily try to dye with insoluble colors without solubilization in the vat.

(Continued on Page 32)

**MOISTURE-RESISTANCE TEST**

The spools were placed in front of a Bahnsen Humidifier and drenched with moisture for several days. At the end of that time U S Vulcanized Fibre Head Spools alone had not warped. While we do not recommend this test because no spool would ever be subjected to this amount of moisture in ordinary use, nevertheless, it shows what U S Vulcanized Fibre Head Spools have stood when put to the test.



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The superior moisture-resisting qualities of U S Vulcanized Fibre Head Spools are due to the special U S method of making the heads. The usual practice is to shave the surface of the fibre heads in a lathe to true the spool up. In making U S Vulcanized Fibre Head Spools, however, the heads are accurately die-cut from sheets of the best obtainable grade of vulcanized fibre, and perfectly centered by projecting tenons on both ends of the barrel. The original calendered surface of the fibre remains intact, a tough, glazed surface that resists moisture and abuse. Tests have proven that a half-ton pull won't budge these heads; therefore, it is certain that they will not loosen under ordinary conditions.

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Controlling Cotton Warp Sizing Pays Dividends

To make money in these days of severe competition, a cotton mill must be able to produce the maximum quantity of cloth, day after day, week after week, month after month, with the smallest amount of seconds, shorts, remnants, waste, etc.

If one department, or even one type of a machine, is not operating properly, it will eventually increase the percentage of seconds, shorts and remnants; the mill's profit is cut down, perhaps reduced to nothing or there is money lost.

Many foremen and superintendents have proven, through years of experience, that a definite control of each machine, or operation throughout the mill is perhaps the greatest aid to high production and good quality. If a majority of the departments are carefully run, yet if one is run carelessly, it makes trouble for all, and the mill, particularly in these items, is liable to lose money or perhaps shut down for lack of profitable business.

It is, therefore, necessary that each department head carefully supervise each person and machine so that this particular department will not be the one to cause trouble.

To the outsider, the slashing department looks easy. He thinks that all there is to do is to run the warp yarns through starch, dry them and wind them on the loom beam. The

up-to-date experienced mill man is familiar with the fact that to properly run a slashing room requires much experience, painstaking care and a definite control of each and every part of the work, from the time the warper beam is received to the delivery of the sized warp on the loom beam.

Unfortunately, the foreman of a slasher room is oftentimes required to so handle the sizing that defects in yarn, spooling, and warping will not interfere with the weaving, reduce production, nor create more than a minimum amount of seconds. Troubles of this nature, however, are not considered in this article, but solely those of slashing.

Some slasher room foremen, who know their job from A to Z, do not obtain the best results, merely because they do not spend sufficient time inspecting their machines, and because they do not control the actions of their subordinates. They are also handicapped by the management of the mill refusing to purchase equipment, or devices, which will assist the man in charge in obtaining best results, even though the improvements would pay for themselves in a short time.

But definite control of the slashing department does work wonders. Perhaps the easiest way to show this, is to give some actual happenings in a number of cotton mills. In

these particular cases, the troubles spoken of were thoroughly investigated, and it was ascertained that the causes of the trouble could be traced directly to the slasher room.

Case No. 1.

Cloth Under Specified Weight Due to Difference in Level of Size in Size Box.

A large mill having many slashers was making a certain gray cloth, which was highly competitive. They had made four or five deliveries on a large order. Suddenly, the customer began to complain that the goods were light, and finally refused to accept deliveries.

Analysis showed conclusively that the cloth complained of did average 4 per cent underweight and this difference was entirely due to the amount of sizing on the warp yarn, as the ends, picks, yarn counts, etc. were the same as they were on the initial deliveries.

Investigation showed that a new man had charge of the filling of the size boxes. When he started to work the foreman did not show him at what level they usually kept the size, nor did he receive any supervision. The new man kept the size solution at a much lower level, and consequently, the yarns were in the size solution a shorter period and did not take up as much starch. They did, however, absorb enough to weave properly. The slashing

was found to be O. K. in all other respects.

The trouble, therefore, was entirely due to lack of control of only one part of the slashing operation. The foreman knew his job, but was not on the job. If he had carefully explained the matter to the new man and checked up on him for a few days, the trouble would probably never have occurred.

Case No. 2.

Loss of Production in Weaving by Changing of Size Solution.

A Southern mill experienced difficulty in getting up the weave room production on a certain special cloth. Yarns were changed, take-up regulated, the proper size formula found and the amount to use finally determined. The weave room production went up and every one who had been working on the job was pleased.

Then, for three succeeding weeks, the production dropped approximately one-third. The weavers and loom fixers were kicking, the boss weaver was wild, the superintendent mad and the customers complaining about deliveries.

Investigation showed that the man in charge of the mixing and cooking of the size had run out of a most important ingredient, did not report it, but left it out of the mix. Inasmuch as the mixing was done

(Continued on Page 30)

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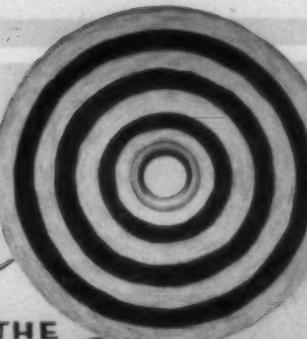
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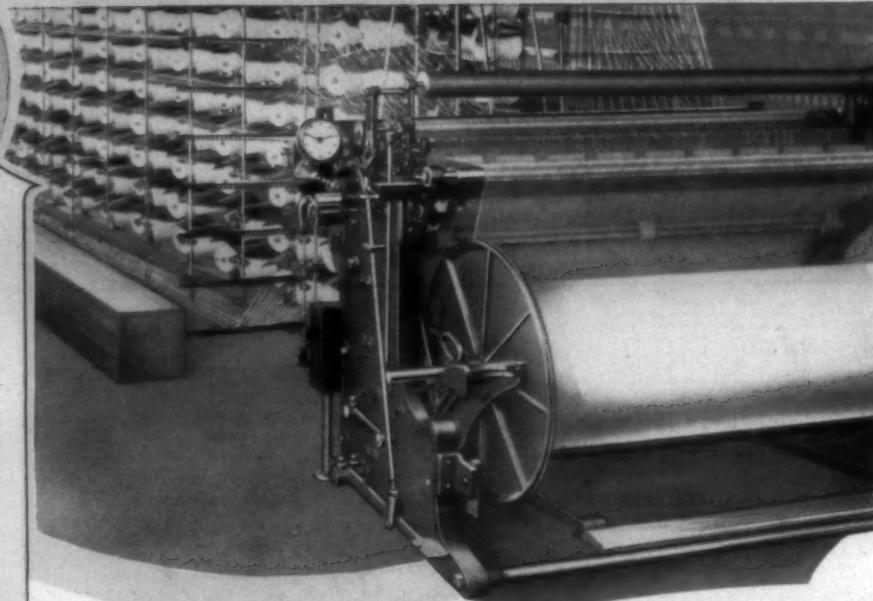
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Since then this Company has built over 2,000,000 winding spindles and marketed over fifty different kinds of winding machines. Many of the originals are still the only outstandingly successful mechanisms of their kind on the market.

This Company is at present the largest organization in the world making winding machines exclusively. Supremacy in size is the logical result of supremacy in demand. Supremacy in demand follows leadership in conception, execution, materials, and service.



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THE LEESONA warping system is a triumph of good marksmanship, the logical result of a steadfast purpose and determined, sustained effort.

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The winder is of simple and sturdy construction, guaranteeing continuous performance at a sustained high winding speed. High speed, combined with a most convenient arrangement of supplies and quick threading tensions, make for the greatest spindle and operative production with the smallest amount of operative effort. The elimination of operative fatigue necessarily increases production.

By means of its magazine feature, the Leesona cone creel makes warping continuous, except when removing a full beam or when an end breaks. The cones of yarn from the 60GF high speed winder are placed on the creel in pairs, both pointing to a common tension device, the tail end of one being tied to the head end of the other. As soon as one cone is emptied it is replaced with a full one, and the head end of the new cone is tied to the tail end of its mate, or the live cone, while the warper is running.

Dead yarn, common to other methods, is *entirely eliminated* with this method of warping from a magazine creel.

Since the yarn in a "Universal" creel is drawn off over end from a stationary cone, there is no inertia or momentum to overcome, such as is encountered when warping from rotating supplies. Warping can, therefore, be maintained at a speed of 250 to 300 yards per minute.

Furthermore, slack and tight ends are eliminated as each end is tensionized uniformly in the magazine creel and, as there is no added strain on the yarn in starting from a stationary cone, it is obvious that better warps are obtained than from systems where revolving spools are used.

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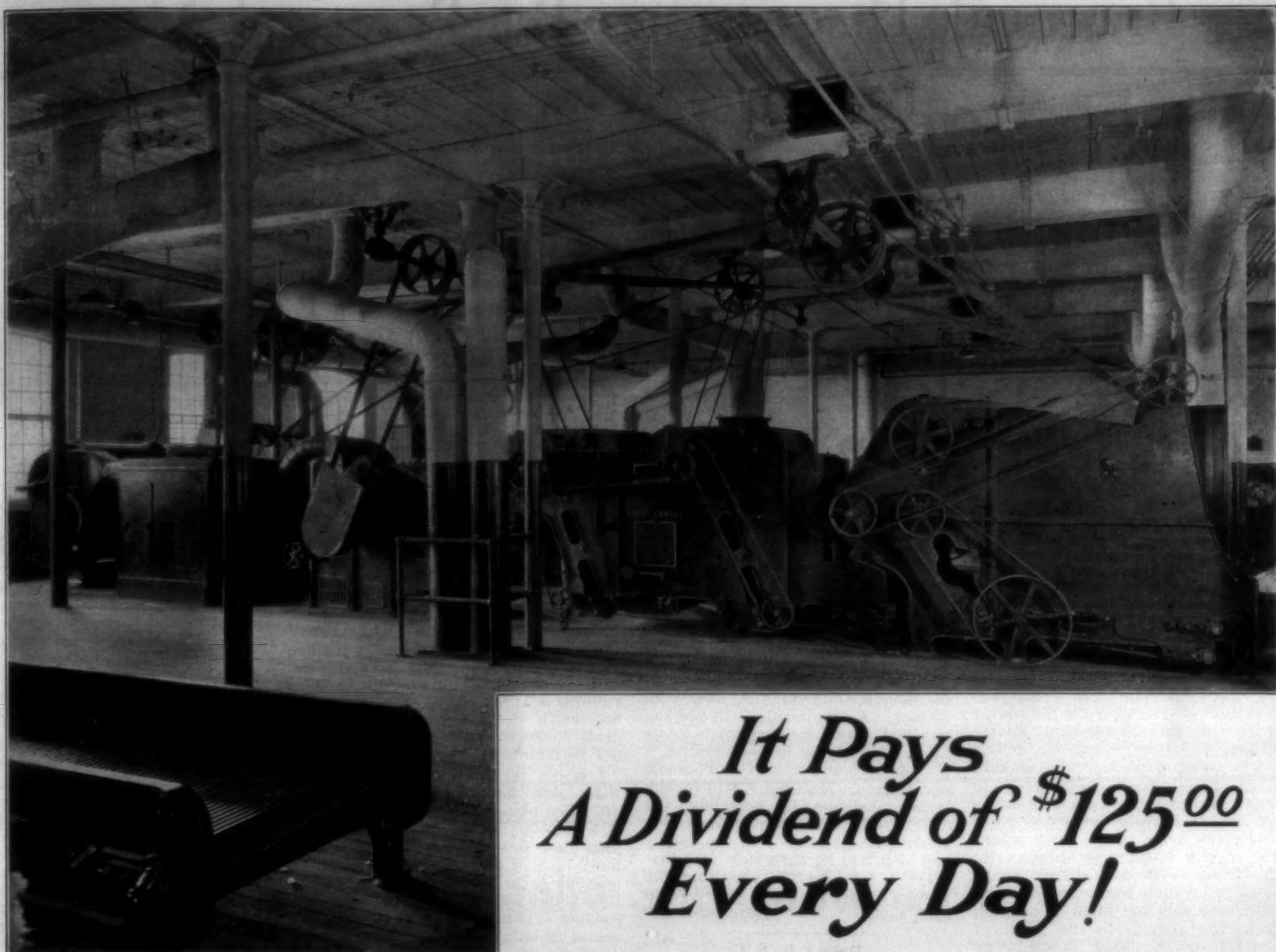
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Carding Spinning Questions.

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Will you please put the following questions in your Discussion Pages:

If you were making a 2 hank roving on speeders, what should the diameter of the bobbin be?

If you were running a card room on good middling cotton and changed to low grade cotton and waste, would you shorten the draft on cards, draw frames and speeders and speeders and put in a little more twist, or would you leave the machines geared up the same way when using the better grade of cotton?

Would you draft draw frames more or less than the doublings when spinning 30s yarn and coarser?

What should be the diameter of the bobbin or warp yarn?

What part of a bobbin should fit the spindle? Why does a bobbin climb up on the spindle?

Want-to-Know.

Answer to Cotton.

Editor:

The party signing himself Cotton who wants to get some information on how to ascertain the weight distribution on the top rolls for coarse work will find the following advice helpful.

The weight weighs $3\frac{1}{2}$ pounds. Lever length from lever screw to notch where the weight is hung to is $4\frac{3}{4}$ inches. From the lever point under the lever to the notch where the stirrup is hung is $\frac{5}{8}$ -inch. On the front saddle the stirrup hangs $12\frac{1}{16}$ of an inch from the center of the front roll and $21\frac{1}{16}$ of an inch from the stirrup to the point of contact on the back saddle. The back saddle weight point of contact is $\frac{1}{2}$ -inch away from the center of the middle roll and $\frac{3}{4}$ -inch away from the center of the back roll.

The rule for finding the gross weight brought to bear upon the top rolls for distribution is as follows: Multiply the length of the lever from the point of contact with the lever screw to the notch where the weight hangs, and divide by the distance from the lever point of contact to the contact point of the stirrup. Thus: weigh $3\frac{50}{100}$ pounds; lever length $4\frac{75}{100}$. $3\frac{50}{100} \times 4\frac{75}{100} \div \frac{5}{8} = 26$ pounds. (The division $\frac{5}{8}$ is the distance between the lever fulcrum or point of contact with the lever screw and the point where the lever hangs onto the saddle stirrup.) The result shows that we now have 26 pounds pressure brought to bear onto the top rolls and which we must now distribute, according to the various distances between the points of contact of the saddle with the rolls. The distance from the stirrup to the front top roll is $12\frac{1}{16}$ of an inch. The distance to the point of contact on the back saddle is $21\frac{1}{16}$. The rule is to multiply the 26 pounds or total weight upon the top rolls by

The Practical Discussion Department of the Southern Textile Bulletin is open to all readers whether they are interested in seeking information on technical questions or are willing to help "the other fellow" who has experienced trouble in some phase of his work.

The questions and answers are from practical men and have often proved extremely valuable in giving help when it was urgently needed.

The interchange of ideas between superintendents and overseers develops a great deal of worth while information that results in much practical benefit to the men who are concerned with similar problems.

You are invited to make free use of this department and to join in discussing various problems that are mentioned from week to week. Do not hesitate because you do not feel that you are an experienced writer. We will take care of that part of it.—Editor.

the shorter distance and to divide by the total distance from stirrup to the contact on the back saddle. Example:

$$26 \times 11\frac{1}{16} \div 33\frac{1}{16} = 9\frac{45}{100} \text{ pounds.}$$

This will give the weight brought to bear on the back saddle. 26 less $9\frac{45}{100} = 16\frac{55}{100}$ pounds which bears on the front top roll. This equals a little over 8 pounds on the two roll bosses.

To distribute the weight of 9 lbs. on the two back rolls. The distance from the front saddle contact with the back saddle to the middle roll is $\frac{1}{2}$ -inch, and to the back roll $\frac{3}{4}$ -inch. A simple rule is to add the two distances together which totals 5-4 inches or $1\frac{1}{4}$ inches dividing 9 pounds by 5 will equal $1\frac{8}{10}$ pounds per $\frac{1}{4}$ -inch. Multiply $1\frac{8}{10}$ by the longer distance to ascertain the weight on the middle roll. Example: $1\frac{8}{10} \times \frac{3}{4} = 5.4$ pounds on the middle roll or $2\frac{7}{10}$ on each side. $1\frac{8}{10} \times \frac{1}{2} = 3\frac{6}{10}$ pounds which is the weight on the back line or $1\frac{8}{10}$ on each side. *Spartanburg.*

Answer to S. C.

Editor:

What does it mean to have 110 per cent production?

Many mills have automatic looms and obtain over 95 per cent of the possible production. Some mills allow their looms to operate during the noon hour while the weavers are at dinner; leaving only a couple of fixers to watch the operations. In such cases a mill often secures over 100 per cent based upon the regular running time of the mill when the operatives are all there.

Producer.

Answer to W. W. T.

Editor:

In answer to the question by W. W. T. regarding Peruvian cotton, I would like to give the following information.

Peruvian cotton is a rough, harsh, wiry kind of cotton, of a type that is easily broken. W. W. T. wants to know what makes his spinning run bad. Although I do not know his machinery lay-out, I will endeavor to give a few points on the subject. I do not think that all of

his trouble is in the spinning. His trouble may start back in the picker room and on through the carding.

I will give a few weights, drafts and speeds that may help him to overcome some of his trouble. Considering that he has two processes of picking, I would recommend on breaker a beater speed of 500 r. p. m. and set the beater $\frac{3}{8}$ -inch from feed roll making a 14-ounce lap. On finisher, a beater speed of 800 r. p. m., setting beater from feed roll $\frac{1}{4}$ -inch making a 11-ounce lap. Then running a 11-ounce lap on the card, making a 45-grain sliver giving a draft 101.80 and carding 70 pounds per 10 hours.

I would set the card as follows: Flats .009; licker-in and doffer to .007; feed plate .017; back knife plate .022, bottom and .029 top; front stripping plate .022 inch top and .034 bottom; mote knives just as close as possible so as not to rub licker-in. He should set all other points according to his own judgment. I would make a lap 600 grains to the yard on sliver lap machine and 500 grain lap on the ribbon lap machine, making a 48-grain finished combed sliver, combing 15 per cent and more if desired. On drawing 50 grain sliver, drafting 5.76 with a front roll speed of 250 r. p. m.

On slubbers make a 50 grain H. R., drafting 3.12, on first intermediate 140 H.R., drafting 4.66; on second intermediate make 4.00 H. R., drafting 5.71; on jack frames 14.00 H. R., drafting 7.00; on spinning make 70s yarn drafting 10.00, using no weight on middle top roller. Set middle steel roll from front roll on $1\frac{5}{16}$ inch, from center to center, top leather roll $1\frac{7}{16}$ inch from center to center. Run 65 per cent relative humidity in carding and 68 per cent in spinning. If the rollers are not properly set in the carding it will be very injurious to the spinning.

Use just as little twist as possible, for rough, harsh, wiry cotton is hard to draw. Use the following twist multiples:

90 X sq. root of hank roving for slubbers.

100 X sq. root of hank roving for first intermediate.

110 X sq. root of hank roving for second intermediate.

110 X sq. root of hank roving for jack.

I hope these few points will be of service to W. W. T.

N. E. A.

Answer to C. K. R.

Editor:

What proportion of filling should a piece contain to nap well? To the above question asked some weeks ago and to which no answer was made, may I be permitted to state that in order to have a fabric nap well it should contain 60 to 75 per cent of filling, depending upon the nap required. *Griffin.*

Answer to Reed.

Editor:

Reed wants to know if it is advisable to have loom reeds made in odd sizes and fractional slleys. In my opinion all reeds should be made in uniform size in length, width and ribs to fit the size of groove in the lay and reed cap.

In regard to the fractional part of the sley there is a difference in opinion among weavers and designers. Some in their reed calculations drop all fractions, while others give and take, that is, when the reed figures, say, 31.22, they would make it 31 dents per inch, while if it figured 31.62 they would make it even 32 dents per inch. One of the best designers I ever knew would not use a fraction less than one-half. If he figured a reed, say, 31.40 he would make it 31.50, or if it was 31.80 he would make it even 32 dents per inch, and that is not bad for sheetings and dress goods, but when you take in twills, sateen and high count fabrics, in my opinion you should use the fractional part of an inch, for there are some goods that contrast very little and cannot be made to count the required number of ends per inch unless you do, and again, there are goods that we have to run 3, 4 and 5 ends in a dent, and in order to make them count up to the specifications we are forced to have our reeds made in the fractional part of an inch. For an example, say we want to make 112x64 sateen. In this we put 5 ends in a dent. You will see at a glance that every fractional part of .20 counts one end out or too much, as the case may be, and if the reed on these goods figured 21.40 dents per inch and you were to drop the fraction .40 your goods would only count 110 instead of the 112.

Trusting that this will serve to your satisfaction.

Kaw.

Squire (to rural lad)—Now, my boy, tell me how do you know an old partridge from a young one?

Boy—By the teeth, sir.

Squire—Nonsense, boy. You ought to know better. A partridge hasn't any teeth.

Conditioning Rayon Yarn

Further details of the conditioning of artificial silks as carried out in the establishments of the Chamber of Commerce at Roubaix, according to the method approved by the International Silk Congress at Milan in June, are contained in a circular sent out by M. Etienne Bulet to French manufacturers. M. Burlet states that although artificial silks have hygroscopic properties similar to those of other textiles, conditioning has hitherto been little practiced, for the reason that different kinds of artificial silks have different hygroscopic capacities, and that even the same variety of artificial silk may have percentages of regain differing widely according to the factory from which it originates, the treatment to which it has been subjected, and its age. Percentages of regain for various categories of artificial silk may thus range from 5 to 16 per cent, and in viscose varieties alone he has noted samples having from 10 to 16 per cent of normal regain.

Percentages of regain are merely the proportion of humidity which a textile should contain in its normal condition. Such a percentage enables the normal weight of goods to be determined easily and with precision when the dry or absolute weight is known, the latter being obtainable with facility and rapidity. Because the coefficient of regain for each natural textile in a given

condition varies very little from one sample to another the use of the coefficient has been adopted in a general manner for ordinary textiles. But, as shown by the preceding figures, this method of procedure is not applicable to artificial silks. The adoption of a uniform average percentage of regain would give rise to possible errors of 5 to 16 per cent. Thus 100 kilos of unbleached cotton yarn in the anhydrous condition would always regain, within a very little, 8½ per cent of humidity under average atmospheric conditions. The "fair and mercantile" weight of 100 kilos of unbleached cotton yarn in the dry state is therefore always 108½ kilos. On the other hand, if we have 100 kilos of artificial silk in the dry state, there is, in the absence of any other information, an uncertainty ranging from 105 to 116 kilos regarding the "fair and mercantile" weight.

Hence the conditioning of artificial silks is possible only if we can determine the real percentage of regain of each lot. Owing to a specially perfected equipment the Roubaix establishments are in a position to make this determination with very great precision by the application of their "direct method of conditioning."

This consists simply in placing the test samples in an atmosphere of average characteristics—one in which textiles of known regain will absorb exactly the quantity of moisture corresponding to their per-

centage of regain. The characteristics of the normal atmosphere adopted at Roubaix are: hygroscopic degree 65 per cent and temperature 18 degrees centigrade under a barometric pressure of 760 mm. The samples are to absorb moisture in this atmosphere until the weight is constant. Their weight at the end of the operation is evidently their normal weight, and consequently the proportion of humidity they then contain is, by definition, their real percentage of regain. This percentage is easily ascertained by afterwards desiccating the samples in question.

In practice they have found, says M. Burlet, that a single lot of homogeneous goods has a percentage of regain which is absolutely the same in all its parts, and thus it is sufficient to effect the preceding determination on a single sample in order to obtain the percentage of regain, which may then be applied to the entire lot conditioned according to the usual method. For instance, if it is required to condition 1,000 kilos of artificial silk according to its real regain ascertained in the normal atmosphere, following the usual procedure of conditioning, three test lots are taken, tared, and then desiccated in the ordinary way; in addition, some small skeins are taken, forming a little supplementary test lot. This is placed in the normal atmosphere until it has acquired the normal humidity, and is then weighed and desiccated. We find, for example:

	Grammes.
Normal weight	208.5
Absolute weight	183.8
Difference	24.7
Per Cent	
Hence percentage of humidity relative to the absolute weight	13.43

This 13.43 per cent is the real percentage of regain of the silk in question. It is applied to the result of the absolute conditioning of the three test lots taken for that purpose, and this gives without any possible error the real "fair and mercantile" weight of the quantity of silk.

It may be noted that if the average regain of 11 per cent had been adopted without verification there would have been an error of 2.43 per cent relative to the absolute weight, or, relative to the real mercantile weight of 1,000 kilos, a difference of about 21 kilos. This difference, in the case of artificial silks with extreme coefficients of regain, might be more than doubled, which clearly shows the interest of the method.

"What's the matter, little girl?" asked a stranger of a child he found weeping bitterly.

"I can't find my mamma."

"When you're out with your mother you should hang on to her skirts. Then you wouldn't get lost."

"I'm too little. I can't reach them."—Indiana Farmer's Guide.

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Visiting Europe

(Continued from Last Week)

On Sunday afternoon, June 19th, we went from Venice over to Lido Venice, which is across the bay and on the Adriatic sea.

Boats go one each hour from the Royal Danelli Hotel to Lido. You step from a side porch of the hotel into the boat and at Lido you step off on a landing at the rear of the hotel.

While in a hotel in Paris, I heard an Englishman tell someone that he "adored" bathing at Lida and I went to Lido with a prejudice against it as the result of hearing that statement, but it is really a beautiful and interesting place.

We entered at the rear of a very large hotel, which is located about two hundred yards from the ocean. Between the hotel and the ocean is a long row of bathing houses which face the ocean. Each bath house is about ten feet wide and has a front porch and an awning which extends out beyond the porch.

For about \$4 per day people rent a bath house, which includes several hammocks and cots. Both men and women put on their bathing suits with silk pajamas over them and lay around on the cots and hammocks in front of their bathing house and occasionally some of them take off their pajamas and go in the water, but that appeared to be rather unusual.

Having neither the time nor the silk pajamas, we rented bathing suits at the public bath house, located at the end of the row, and entered the Adriatic sea in American style.

As the big season at Lido-Venice does not begin until the middle of July, we did not see it to best advantage, but it is a very attractive place.

We returned to the Royal Danelli Hotel for dinner and about 9 o'clock hired a gondola for a trip on the bay and through the Grand Canal.

A gondola is a long boat with high ends and a boatman propels same, with a long paddle, while standing upon the rear section.

Out on the bay there were three large gondolas with colored lanterns and as we drifted through the darkness toward them we heard musical instruments and singing, and as we approached we found that each contained singers and musicians and was surrounded with gondolas like ours.

When we first pushed up to one of the groups there was about ten gondolas between ours and the gondola of the musicians, but as the inside gondolas from time to time slipped out to go to the other singers or elsewhere we drew closer and closer to the singers and other gondolas came up outside of ours.

Somehow the music and the singing out there on the bay with the swish of the water against the gondolas seems sweeter and more beautiful than under other conditions, and for generations it has been one of the attractions of Venice.

We visited in turn all three of the music boats and then for an hour or more we drifted in our

gondola up and down the grand canal.

The houses of Venice are all located upon canals and viewed from the outside have not much beauty, but as we passed down the canal in the darkness the lights in the houses gave us glimpses of the interiors and almost without exception they seemed to be filled with beautiful decorations and pictures. Many of the pictures were very large and appeared to be very handsome.

Returning to our hotel about 11 o'clock, we walked to St. Mark Square, and although it was Sunday, we found a church lottery running full blast.

For about two cents each we bought chances which consisted of small slips of paper. When they were unrolled many of them contained the words "Thank you," in Italian, which meant that you received nothing, while others contained numbers.

On each side of St. Mark's Square shelves had been erected and filled with many articles, each numbered, and if you drew a number you received the article covered by same.

Quite a number of the articles were bottles or jugs of wine. One of the ladies in our party won a bottle of wine about eighteen inches tall but it was not fit to drink.

A church conducting a lottery on Sunday and offering wine and alcoholic drinks as prizes is an illustration of the difference in the customs of the countries.

We spent Monday seeing the shops and sights of Venice and went to Lido-Venice for dinner that night.

At 11 o'clock we loaded our baggage upon a gondola and went through the winding canals of Venice to the depot, where we took a steamer for Genoa, Italy.

After we left the grand canal the sewer odors grew worse and we were happy when our gondola reached the station.

Sleepers in Europe are not like those in America but are comfortable. They have narrow compartments with two berths which run crosswise of the car. There is a narrow aisle that runs down the side of the car and the doors to the compartments open upon the aisle.

The next morning the car porter very kindly brought us coffee and small sweet cakes, but we later received from him a bill for his services as porter, for the coffee and cakes and an additional amount for bringing us the coffee and cakes.

Italy was running true to form. At 9 o'clock we got off at Genoa, Italy, our last stop in Italy, and took a trip over Genoa in order to visit the birthplace of Christopher Columbus and see other points of interest.

At one point on the hills we had a fine view of the harbor of Genoa, which is an unusually fine one and from which ships run regularly to New York.

By David Clark

At 10:30 a. m. we left for Nice, France, but before doing so had one last taste of Italy. The young lady in our party had a considerable amount of Italian money and went to the money exchange window in the railway station to get it changed into French money. When on the train she found that the top note they had given her was French francs worth 4 cents per franc, but underneath they had put Belgian franc notes (worth 3 cents per franc). As the Government of Italy owns the railways, she had been short changed in an official office and also later had to pay an additional exchange in order to get the Belgian money changed into French.

Our train traveled along the Mediterranean sea through one of the most beautiful sections of Europe, but more than the beauty we enjoyed the fact that we were getting out of Italy.

The railroad runs along the Mediterranean sea and at very few places is it out of sight of the water. The portion within the boundaries of Italy is known as the Italian Riviera but after it reaches French soil it is called the French Riviera.

Almost the entire distance is covered with resort hotels and the flowers are unusually beautiful. After we reached France the vineyards became more frequent and agricultural conditions seemed to be much improved.

About 5 p. m., after one of the most beautiful trips in Europe, we passed through Monte Carlo, which is located about ten miles from Nice, France, but is in the principality of Monaco.

I was told that Monaco was independent and had a government of its own. I was also told that the people of Monaco pay no taxes and that the Government is supported by the profits of the Casino or gambling house. The people who live in Monaco are not allowed to gamble in the Casino, which shows how the people who own the Casino regard the chances of winning.

Soon after passing Monte Carlo we reached Nice, France, and drove to the Ruhl Hotel, which is located upon a street fronting upon the ocean.

It is a beautiful hotel and well furnished, and we were given large rooms with private bath for rates which were equivalent to only \$2.50 per day.

The low rates were due to a great extent to the fact that it was an off season and there were very few guests in the hotel.

Our real reason for going to Nice was to visit and see Monte Carlo, and about 10 o'clock that night we hired a car and drove on the winding road that connects the two towns.

Everybody who has visited Monte Carlo has told of the wild ride over that road, as it seems that the French drivers take a delight in hitting the curves at terrific speeds but seldom have an accident.

We had a powerful car and a good driver, but he did not seem to have any desire to scare us to death and drove very moderately.

I was very much disappointed in the Casino, as it was by no means as elaborate as I had expected.

All my life I had heard of Monte Carlo and I had read numerous books whose scenes were laid there.

Instead of elaborate and gorgeous it appeared to me to be rather plain; in fact, it was by no means as handsome as the Casino which is connected with the Kursaal at Ostend, Belgium.

Due to being an off season, there was not a very large crowd and many of those present were not in evening dress.

These were numerous games but I did not know how to play any of them except roulette.

A roulette wheel has a disk with 36 pockets and as the disk is revolved in one direction a marble is started to spinning around in the other direction. The marble finally loses its momentum and falls into one of the 36 pockets, all of which are numbered.

If you place a chip on 27 and the marble stops in the pocket marked 27 you get 36 chips of the same value as the one you played, because there was one chance in 36 for you to win.

If you place your chip half on one number and half on another and either number wins, you get half as much as if you had played the winning number alone.

Half the pockets on the roulette wheel are red and half of them black, and you can bet that the winning number will be red or bet that it will be black, but if you wish you only get one chip. The same rule applies to even and odd numbers.

The smallest chip that you can play is equivalent to 60 cents, but from that the sky is the limit and I saw men and women playing \$50 and \$100 chips and losing or winning in a few minutes as much as it cost me to go to Europe.

I bought a stack of 60-cent chips and with varying luck played for about an hour.

I finally found that I had only two chips left, but made two plays, won both and had one more chip than I started with. I played the extra chip and lost and then cashed in my stack so as to be able to say that I broke even at Monte Carlo.

One of the ladies in our party cashed in a good winner, while another lost every chip she bought, so after all we did not get away with much Monte Carlo money.

After we quit we watched the others, especially those who played big stakes, but there appeared to be no sensational wins or losses.

It is said that many men and women, having lost everything, get up from the table and, walking out upon a porch at the end of the Casino and commit suicide.

Monte Carlo is the most famous gambling place in the world and has existed for a very long time.

In its halls men gather from every

(Continued on Page 26)



JOHN N. WILLYS

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Finishing Processes of Cotton Fabrics

ALL cotton materials may be considered as more or less orderly collections of hairs or fibres, and the individual hair is the smallest cotton structure which the investigator is able to examine by direct visual methods. If its coarseness or fineness were expressed in the manner customary for cotton yarns, its "counts" would be found to vary on the average from about 2,000 for coarse Indian fibre to about 6,000 for the finest Sea Island growths, says an article by Dr. D. Clibbens, in the Manchester Guardian. The fineness of a particular growth is not usually expressed, however, in terms of a hypothetical fibre 840 yards long, which would be a somewhat artificial method of expression, but by the average weight of a piece cut from the hair to measure exactly one centimetre in length.

It is possible by means of sensitive balances to determine this value, which is called the "hair weight," and it has proved to be of considerable significance in technical processes. When, for example, during the manufacture of a cotton fabric the quality of the warp yarn is changed by substituting for the original warp yarn spun in identical manner from cotton of a growth or mixing, the change is generally revealed as a "fault" in subsequent dyeing, namely, a change in shade coincident with the change in the quality of the warp yarn. Cottons different growths or varieties when dyed together in the same bath do not, in general, exhibit the same shade.

It has been shown that such shade differences cannot be ascribed to chemical differences between the cottons, but are due to variations from growth to growth in the structure of the individual hairs, the effect of changes comparable with the effect of changes in the coarser mechanical structure of yarns or fabrics on the shade of dyed material. Just as a change of counts in the yarn produces an apparent change of shade in subsequent dyeing so, too, a change of "counts" in the individual hairs result in a dyeing defect.

When a number of different cotton varieties are dyed in the same bath the order of shade depth is the same as that of hair weight, the fine Sea Island and Sakel cottons appearing the lightest and the coarser American and Indian cottons the darkest in shade. While from the point of view of the spinning operations a mixing must contain component growths of approximately equal staple lengths, the ideal conditions for securing level dyeing are thus obtained by mixing growths of equal hair weight.

Another structural feature of the individual cotton hair which is of some practical significance is the shape of cross-section. This is extremely variable, changing from approximately circular sections, through oval forms more or less flattened and distorted, to a shape which approaches a section of a flat ribbon. It is possible with a suitable microscopic technique to meas-

ure, first, the longest diameter of the section, and, secondly, the shorter diameter at right angles to it; the proportion which these two bear to one another—called the "ratio of the axes"—is used to describe quantitatively the shape of the section. If it is circular this ratio is equal to one, since all diameters of the circle are equal, but the more flattened the shape of the section the greater will the disparity between the axes become, and the more will their ratio diverge from unity. It has been found that the lustre of raw cottons, one of their most valued finishing qualities, depends, not on their fineness or hair weight as has sometimes been supposed, but on the shape of their cross-sections. The most lustrous raw cottons are those which are most nearly circular in section, for which the ratio of axes is nearest to one, and the greater the divergence of this ratio from unity the less is the lustre of the fibre. Of all raw cottons examined the most lustrous varieties are Sea Island and Sakel, and this is due, not to their fineness, but to their approach to the circular section.

It has been said that the smallest cotton structure accessible to direct visual observation is that of the individual hair, in this sense the unit from which all cotton materials are built. The substance from which the hairs themselves are formed, called cellulose, belongs to the class of bodies described by the word "colloid," and before the first steps could be taken towards any fundamental understanding of the behavior of cotton during dyeing and finishing it was necessary to await the development of that infant among sciences, the study of colloids. The recognition of cotton as a colloid formed such an important step in the progress of its study that a brief description of its significance is not out of place.

When a substance such as sugar is added in sufficient quantity to water it enters into solution to a perfectly definite extent, and any further additions of the solid remain unchanged; the sugar in its solid state possesses one definite set of properties, while another and different set characterizes its state of a saturated solution. Compared with this behavior that of substance like gelatine is very different. Placed in water, it first swells—the water may be said to enter it instead of it into the water. If the temperature is raised the swelling increases, and finally a solution of gelatine is obtained, but there is no sharp line of demarcation between swelling and dissolving, between swollen gelatine and gelatine solution. The latter merely represents the extreme case in which the whole of the water has entered the gelatine or in which the gelatine has swollen to such an extent as to fill the whole of the space occupied by the water. This behavior, which differentiates gelatine from sugar, is characteristic of a colloid. Instead of the two sets of properties necessary to describe, for example, sugar in its solid and dissolved states, a colloid must be des-

crized by an infinite series of states corresponding to all possible "degrees of swelling."

It is precisely in this sense that cotton is said to be a colloid. When the fibre is treated with water it swells, the amount of swelling being dependent upon the temperature. With the degree of swelling the elastic nature of the cotton varies also, and in general this material, like gelatine, becomes more plastic with increased swelling, that is to say, it more easily receives permanent deformations of shape under the influence of external pressure or other mechanical constraints. Such shape deformation is, however, the essential feature of all finishing processes which aim at producing specific effects on the handle or lustre of cotton fabrics by modifying the nature of their surfaces. The great importance of water conditioning in all calender finishes is thus explained by the necessity of attaining the optimum conditions of colloidal swelling for maximum plasticity of the material. When cotton fabrics finished by the application of heat and pressure are wetted, the fibres again swell, and the effect of the pressure upon the shape of the surfaces is therefore lost; the finish is said to be impermanent.

The cotton hair swells to a much greater extent in caustic soda solutions of a suitable strength than it does in plain water, and during the subsequent washing the material becomes extremely plastic, so that it can be extended considerably under the influence of applied tension without contracting when the tension is released. Here again the mechanical treatment, by smoothing the surface of the cotton hairs while they are in a plastic state, produces a specific finished effect—the lustre characteristics of mercerized material. The swelling of cotton in mercerizing caustic is so much conditions that the mercerized fin greater than that in water under any ish is not appreciably affected when the material is treated with water; like all true "chemical" finishes it is said to be permanent.

Cotton, unlike gelatine, does not swell indefinitely in water or even in caustic soda solutions, since it does not actually dissolve in these liquids, and the swelling limit appears to be set in the normal mercerization process by the cuticle of the cotton hair. This is the outermost layer which surrounds the hair as the rind of a banana surrounds the fruit, and, unlike the cellulose which forms the substance of the hair proper, it does not swell appreciably under the influence of caustic soda solutions. There are certain liquids, such as cuprammonium, strong sulphuric, hydrochloric, or nitric acid, in which the cellulose swells so strongly that the cuticle is ruptured, and, no limit then being set to the swelling of the hair, a solution of cellulose may be obtained. The behavior of cotton towards these liquids is precisely analogous to that of gelatine in contact with water, all degrees of swelling being possible.

Much research work done during the past few years has had for its object the measurement of the swelling cotton in different media

and of the effect of swelling on the properties of the material, more particularly its tensile strength and elastic behavior. A catalogue of the results obtained does not lie within the scope of an article of this nature but an attempt has been made to show the very direct practical bearing of the work. From what has been said it will be clear that no sharp line of demarcation can be drawn, from a scientific point of view, between the chemical finishing of cotton materials and the production of artificial silk; the two operations represent different stages of the same physical process, namely, the swelling of cellulose, and it is safe to predict that this fact will be reflected to an increasing extent in the progress of the industries concerned.

Another group of recent researches is concerned with the analytical control of the bleaching, dyeing, and finishing industries from the point of view of the textile quality of the production. In these industries cotton materials are treated with chemical agents for a variety of purposes—for the purification of the raw fibre, for the fixing of dyestuffs on it, for inducing colloidal swelling of the cellulose,—but it is one condition essential to the success of all such treatments that they must be so regulated as to avoid attacking or breaking down that ultimate chemical unit known as the cellulose molecule. Damage caused to the chemical structure of the cellulose by injudicious use of chemical agents has the same objectionable results as damage to the mechanical structure of the cotton inflicted, for example, by improper setting of the machinery in the spinning processes, namely, a loss of tensile strength. When a finished cotton yarn or fabric is found to be tender it is not generally possible to decide from tensile tests whether the damage is due to mechanical causes or to chemical attack of the cellulose, sustained during the finishing processes, but this decision can be made with complete certainty by a measurement of the viscosity of the cotton.

It has already been said that cotton dissolves in the solvent called cuprammonium, and the solution possesses a property common to other colloidal solutions. Even though containing relatively little cotton, it is extremely viscous, that is, its rate of flow through a small orifice is very slow. The measurement of the rate of flow of a solution of standard strength through a standard orifice. Cotton which has suffered no chemical attack possesses a very high viscosity, but in proportion as the cellulose is chemically degraded its viscosity in cuprammonium solution diminishes. No single instance is known in which tendering of cotton by chemical agency is not accompanied by fall in its viscosity. It is clear that purely mechanical tendering, caused, for example, by breaking or wounding the individual cotton hairs, cannot affect the properties of the material in solution, and the measurement of viscosity gives, therefore, a sure method of distinguishing between damage caused in mechanical opera-

(Continued on Page 28)



EVERY successful business has made big profits *in addition* to those earned by manufacturing or sales. Some ventures have made *larger* profits this way than they have made from the business itself . . .

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present output of many of the industries now operating. Textile machinery, mill supplies, food and feedstuffs, building supplies and many others are in colossal demand.

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SOUTHERN TEXTILE BULLETIN

Member of Audit Bureau of Circulations
Member of Associated Business Papers, Inc.

Published Every Thursday By
CLARK PUBLISHING COMPANY
Offices: 18 West Fourth St., Charlotte, N. C.

THURSDAY, AUGUST 4, 1927

DAVID CLARK
D. H. HILL, JR.
JUNIUS M. SMITH

Managing Editor
Associate Editor
Business Manager

SUBSCRIPTION

One year, payable in advance	\$2.00
Other Countries in Postal Union	4.00
Single Copies	.10

Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

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Our Opinion Unchanged

THE decline in the cotton market during the first of this week has not changed our opinion that higher prices will come as the result of severe boll weevil damage.

One report says that the market broke as the result of a private estimate of an indicated crop of 15,200,000, which, if true, would mean that in the face of boll weevil infestation, the average yield per acre would be approximately the same as the record breaking yield of the past year.

The consumption of American cotton, including linters, is shown by Secretary Hester, of the New York Cotton Exchange, to have been 17,428,000 bales and the carryover, instead of being 10,000,000, as was predicted by the bears, proved to be only 7,200,000.

The year's exports from the United States was 11,243,000, and instead of these exports resulting in cotton piling up in Europe, Secretary Hester's figures show that the cotton went into consumption.

Another factor that must have a bearing in the long run is that very severe damage has occurred to the cotton crop of India and that will result in a larger demand for American cotton.

We do not urge anybody to accept our opinion upon cotton, as everybody makes mistakes in regard to that commodity, but it appears to us that the drive during the early part of the week was made by speculators for the purpose of running the public out of the market and getting their margins.

The test will come when the new crop of boll weevils hatch and migration periods begin.

That we are not alone in our opinion of the cotton market is evi-

denced by the following item in the Daily News Record:

Lean Lowenstein, of M. Lowenstein & Sons, sails today on the Olympic, to be gone about four to six weeks. Mr. Lowenstein is very optimistic on the cotton and cotton situation generally, stating that he would not be surprised to see cotton go to 22 cents and that, on this basis, he expected print cloths and other cotton fabrics to go higher in price.

It is expected that there will be more or less sharp movements in price but until more is known about the boll weevil damage, we can not believe in any sustained downward movement.

A Fine Opportunity

IN our opinion one of the greatest needs of the United States is the election of a President for six years without the privilege of succeeding himself.

The statement of President Coolidge that he will not be a candidate in 1928 has presented a splendid opportunity for making the change and it is doubtful if another such opportunity will ever exist.

The election of a President for six years without the right to succeed himself has two very great advantages.

In the first place, by putting two more years between presidential campaigns it relieves the country of fifty per cent of presidential politics.

In the second place, it will give us a President who does not have to consider his actions in the view of whether or not they will aid him in being re-elected and therefore one who can act without fear of political leaders and political effects.

Now that there is no one who would be directly affected by the change, Congress should submit a constitutional amendment to the

States and we believe that it would be very quickly ratified.

The States that have elected their Governors for a single term without giving them the privilege of re-election have made more progress than those that have Governors who from the day they take their seats must begin planning their next campaign.

This is a splendid time to lengthen the period between presidential campaigns and to place our Presidents where they can not run for President while holding the office.

Latent Strength in Cotton Goods

THE only thing that is weak about the cotton goods situation is in the back bones of the cotton mill managers and commission merchants who have been dominated so long by the buyers of goods that they are afraid to ask or demand profitable prices.

A commission house which said in its weekly letter of July 23rd that their sales during the week had been fifty per cent greater than the production of its mills, says in its weekly letter of July 30th:

Our sales for the week have again been large and the total yardage sold has been approximately the same as last week. Colored goods showed a healthy increase with a wide distribution in both the domestic and export trades, and the total yardage sold was considerably in excess of production; we advanced the price on staple ginghams $\frac{1}{4}$ cent a yard. Our fine and fancy goods department broke their record for any week this year, large sales being made on silk and cotton mixtures, broadcloths, shirtings, and special constructions. There has also been considerable activity on sheets and pillow cases, with an advance in price in a number of lines. Further advances of $\frac{1}{8}$ cent to $\frac{1}{4}$ cent a yard were made on print cloths, and certain constructions are scarce for spot delivery; spot goods are bringing a premium of $\frac{1}{8}$ cent to $\frac{1}{4}$ cent over contracts. Sheetings have advanced $\frac{1}{8}$ cent to $\frac{1}{4}$ cent a yard on various constructions and we have advanced some drill constructions $\frac{1}{8}$ cent a yard. Buying has been more or less general in all lines and has been well distributed.

Buyers are claiming and mill men anticipating that any advance in prices will reduce purchases and yet we note the following in the Daily News Record relative to the situation on denims after prices were advanced.

When the prices were first advanced to a basis of 16 cents for 2.20s, there was expectation that while this level was believed to be justified in every way, on the basis of the higher cotton market, that there would be stubborn resistance on the part of the buyers. The first contrary reflection, however, was in the picking up of whatever goods were to be had under this price—and then, the reports indicated that overall manufacturers were taking what they could get at 16 cents. Mills have not been willing to sell beyond September and those making the standard products have been pretty well sold through September, for some time. It has been evident that quite a few of the overall manufacturers have been short of merchandise—more so than was thought to be possible at this time. Now, the intimations are that another advance in denims is likely, when the last quarter of the year is offered for sale.

This situation is taking place in the face of a record and marked

Thursday, August 4, 1927.

increase in the consumption of American cotton consumption of American cotton which during recent years has been:

1923-24	11,241,000
1924-25	14,217,000
1925-26	15,442,000
1926-27	17,438,000

The Child Labor Amendment

This "come back" desire is not necessarily confined to prize ring circles. Anyone who watches a legislative assembly will agree to that. Indeed, there is probably no other place where "come backs" are as persistently attempted. The so-called Federal Child Labor Amendment has just bobbed up again in the Georgia Legislature, now in session. The amendment was overwhelmingly defeated by the Georgia solons when they last met but labor union representatives and upholders went before a bare quorum of a House committee and succeeded in getting a favorable report on their resolution to approve the proposed amendment. And still some people say it isn't necessary in this world for somebody to watch somebody else! —Bulletin of Associated Industries of Kentucky.

Only Half Vote

IN 1896 eighty per cent of the eligible voters of the country voted, but in 1912 only 62 per cent went to the polls and in 1920 only 49 per cent; and the President was elected by a majority of a minority of the eligibles. In 1924, through an intensive campaign to get out the vote, the interest was increased to 52.1 per cent and the President was elected by a majority of a majority of the eligibles.

Business men complain about taxation and radical legislation, but have themselves to blame because they do not take the trouble to vote.

Texas Advertises

AN advertisement of a Texas utility company, printed in a national magazine, says:

"Locate your mill in Texas, and if you want to run 100 looms to the weaver, everyone will pitch in and help you do it. If you have any plan for decreasing the cost of production, every individual in the town where your mill is located in Texas will back you up in your efforts. There won't be any labor agitators coming in to mislead your operatives or to create an adverse public opinion. If competition forces you to run 25 sides of spinning to the operative, and it will help get down the cost of production and the consequent lower cost of goods to the consumer, everybody in the State will be on your side of the matter. Down here we all know that the way to make progress is to make goods better and more economically than the other fellow, and that on this basis everybody profits. The mill makes more money, the operatives get steady work, and the people themselves get the goods at lower prices. Public opinion favors the able manufacturer who keeps his mill running, his help employed and his stockholders satisfied."

Personal News

N. B. Ross has become master mechanic at the Houston Cotton and Twine Mills, Houston, Texas.

J. M. Waddleton has become overseer of weaving at the Jennings Mills, Lumberton, N. C.

M. C. Williams is now second hand in the new weave room at the Jennings Mills, Lumberton, N. C.

R. Hester has been promoted to section hand in twisting at the Pelham Mills, Pelham, S. C.

W. W. King has resigned as section hand in spinning at the Pelham Mills, Pelham, S. C.

Geo. Pritchard is now paymaster and timekeeper at the Houston Cotton and Twine Mills, Houston, Texas.

F. D. Parsons has been promoted to card grinder at the Houston Cotton and Twine Mills, Houston, Texas.

J. B. Duval has resigned as manager of the Brookford Mills, Brookford, N. C., a position which he has held for the past seven years.

G. S. Watkins has become assistant overseer of spinning and spooling at the Dover Mills Company, Shelby, N. C.

J. W. Shiver has resigned his position at the Dover Mills Company, Shelby, N. C., and is now with the Manchester Mills, Manchester, Ga.

R. L. Smith has been promoted from night superintendent to general superintendent of the Houston Cotton and Twine Mills, Houston, Texas.

E. S. Hobbs has been promoted from night overseer to day overseer of carding at the Houston Cotton and Twine Mills, Houston, Texas.

Thomas Coker has been promoted to second hand in carding at the Houston Cotton and Twine Mills, Houston, Texas.

C. C. Russell has been promoted from second hand in carding to head card grinder at the Bibb Manufacturing Company No. 2, Macon, Ga.

O. L. Wagstaff, superintendent of the Amazon Cotton Mills, Thomasville, N. C., is undergoing treatment at a hospital at Greensboro.

Lloyd Beacham has been promoted from night overseer to day overseer of spinning at the Houston Cotton and Twine Mills, Houston, Texas.

Clarence D. Stewart has resigned as manager of the Arkansas Textile Mills, Pine Bluff, Ark., but will retain his interest in the company.

F. A. Hansusek will be manager of the new Pinoca Mills, Charlotte. He was formerly superintendent of the Stuart Mills, of the same place.

Yates D. Smith has a contract for overhauling the spinning at the Loray plant of the Manville-Jenckes Company, Gastonia, N. C.

James Goff has been promoted to second hand in spinning at the Houston Cotton and Twine Mills, Houston, Texas.

August Childs has been promoted to second hand in twisting and winding at the Houston Cotton and Twine Mills, Houston, Texas.

John Ward has been promoted from section man in twisting to second hand in twisting and finishing at the Pelham Mills, Pelham, S. C.

Dewey Gotshaw has been promoted from oiler and bander to section hand in spinning at the Pe'ham Mills, Pelham, S. C.

M. R. McBride has resigned as master mechanic at the Houston Cotton and Twins Mills, Houston, Texas.

Ellis Goodner has been promoted from night overseer to day overseer of twisting and winding at the Houston Cotton and Twine Mills, Houston, Texas.

Edward Renault will be manager of the Clinton Manufacturing Company, which will establish a lace manufacturing plant at Clinton, S. C.

W. M. Martin has resigned as second hand in spinning at the Piedmont Mill, No. 2, Egan, Ga., to become overseer of carding at the Adams Duck Mills, Macon, Ga.

J. O. Epps, who recently resigned as night superintendent of the Carolina Textile Corporation, Dillon, S. C., has become overseer of carding at the Rhodhiss Mills, Rhodhiss, N. C.

W. F. Smith has resigned as superintendent of the Houston Cotton and Twine Mills, Houston, Texas, to become general overseer of spinning at the Loray plant of the Manville-Jenckes Company, Gastonia, N. C.

William F. Northrop, son of Jonas Northrop, formerly of the Hopedale Manufacturing Company, has joined the sales organization of the J. H. Williams Company, well known shuttle manufacturers.

C. B. Buchannan has accepted the posititon of superintendent of the Cotton Mills Products Company, Natchez, Miss., succeeding E. S. Tramwell, who recently resigned.

B. B. Comer, head of the Avondale group of mills, is seriously ill at his home in Birmingham. Mr. Comer is one of the most prominent cotton manufacturers in the South and was formerly Governor of Alabama.

George M. Wright has resigned as president of the Watts Mills, Laurens, S. C., to accept the presidency of the Republic Mills, Great Falls, S. C. He succeeds Robt. S. Mebane, who recently sold his interest in Republic and retired as president. Mr. Wright will enter his new duties in September. His successor at Watts Mills has not been named.

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—causes maximum thoroughness and completeness of the Kier boiling;
—readily dissolves and removes the natural fatty and waxy impurities in the cotton, attaining perfect white in bleaching;
—requires only one boil where two were needed;
—in open and closed dyeing machines, eliminates the usual difficulties of ordinary turkey red oils through foaming, being recommended especially for Franklin Dyeing Machines;
—in raw stock dyeing, eliminates static by the addition of from 1½% to 2%.

And all these advantages come back to its essential property—its *power of penetration*. Try out Amalie Sonolene and be convinced!

Leaflet completely describing the properties, function and uses of Amalie Sonolene sent anywhere free upon request.

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MILL NEWS ITEMS OF INTEREST

Monroe, N. C.—Directors of the Monroe Mills Company have declared the usual 5 per cent semi-annual dividend. Officials were all re-elected. The Monroe Mills are being operated on full time.

Goldsboro, N. C.—A shipment of machinery for the new silk mill built here on North Green street for Keene Artistic Webb Company, of Keene, N. H., is on its way here, according to announcement of K. Kecha, Jr., who is to be the manager of the plant.

Great Falls, S. C.—George M. Wright, president of the Watts Mill, Inc., of Laurens, S. C., was elected president of the Republic Cotton Mills, according to a statement from the Southern Power Company. Mr. Wright succeeds Robert S. Mebane, who resigned a short time ago, together with his brother, H. B. Mebane, who was vice-president and treasurer.

East Point, Ga.—It is expected that Cluett, Peabody & Co., of Troy, N. Y., nationally known shirt manufacturers, will establish a plant here. It is understood the company has arranged to lease or buy the building formerly occupied by the Oliver Rim Company.

The proposed plant is to manufacture shirts, handkerchiefs and underwear from fabrics purchased from mills in this section.

Pine Bluff, Ark.—Clarence D. Stewart, who came here a year ago from Amsterdam, N. Y., has resigned as manager of the Arkansas Textile Company Mill here. He will devote his time to looking after his interests in the Allied Knitting Company in New York.

He retains his stock in the textile company here and will continue as vice-president and member of the board of directors. The resignation becomes effective August 1. Mr. Stewart and his family will make their home at Forest Hills.

Saxapahaw, N. C.—C. V. Sellers, a business man of Burlington, bid \$40,000 for the White-Williamson Company's cotton mill here at a receiver's sale at the court house door in Graham.

The sale was ordered by Chas. A. Scott, a banker, of Graham, for the satisfaction of creditors of the mill. Until the bid is reviewed by the court, and held open for advanced bids, it is probable that no statement will be made regarding plans for operators.

For many years the mill was operated profitably. It was caught in the depression of two years ago and became involved to the point that it was closed down because it could not manufacture and sell at that time profitably.

It is likely that following confirmation of the sale, or some future sale in case resale is ordered, it will be reorganized and opened up again.

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Charlotte, N. C.—The Pinoca Mills, at Pinoca near here, expects to begin operations this week. The company will weave brocades and other rayon fabrics, and has an equipment of 60 looms, production to include a wide range of draperies. The plant represents an investment of about \$250,000 and is owned by the National Fabric Co., of New York. F. H. Schloss, of Providence, R. I., is president of the company and F. A. Hansek is local manager.

Sylacauga, Ala.—The Avondale Mills Company has purchased the site of the Wisconsin-Alabama Lumber Company, adjoining the properties of the Avondale Mills here. The property consists of the buildings and manufacturing site formerly occupied by the lumber company and adjoining land.

The property was valued at \$165,000, but the price paid by the Avondale Company has not been disclosed.

It is rumored that the Avondale Company intends to erect one of the largest and most modern cotton mills in the State on the new site. The property already has a large number of residences and cottages on it, erected by the Wisconsin-Alabama Company, which can be utilized for the housing of several hundred workers and their families.

Mebane, N. C.—The Howard Silk Throwing Company, of Philadelphia, has completed arrangements for the removal of its plant to Mebane. A building has been obtained and now is being remodeled to accommodate the equipment. It is expected to have the plant in operation in September.

The company, operating equipment for converting and dyeing rayon and for throwing silk, it will have an initial output of 8,000 to 9,000 pounds weekly, which will be increased later by additional equipment. Fred H. Sharp is president and J. E. Crayton, Jr., formerly of Charlotte will be local manager.

Gaffney, S. C.—Dividends on the stock of the Musgrove Mills, of Gaffney, and Broad River Mills, of Blacksburg, will be paid to stockholders August 1, according to announcement made by Dr. W. C. Hamrick, head of the Hamrick group of mills, of which the Musgrove and Broad River are units.

Stockholders in the Musgrove Mills will receive a semi-annual payment of 3½ per cent. The capital is \$528,000. Broad River shareholders will be paid a semi-annual dividend of 5 per cent on a capitalization of \$181,000. The Limestone and Hamrick Mills, two other units in the Hamrick chain, paid stockholders semi-annual dividends of 5 per cent each on \$500,000, July 1.

Greenville, S. C.—Deering, Milliken & Co., of New York, became the sole selling agents of Judson Mills on August 1 it was announced here.

This has been expected in textile circles, following the sale of the Judson control to Deering, Milliken Corporation, allied interests of the Deering, Milliken Company.

The Judson branch of the Hunter Commission Company, which has been selling Judson products, will be closed in New York on August 1. Brown Mahon, vice-president of Judson, who has been spending much of his time in New York, will continue to divide his time between this city and New York. He is now in Greenville for a few days.

Clinton, S. C.—Plans for the removal of the Burns Lace Manufacturing Company, of Middletown, Conn., to Clinton, and its material enlargement were announced by J. F. Jacobs, of a local printing concern.

Officers of this company, which is to have a total capitalization of \$250,000, will be: Frank B. Burns, former head of the old Burns Company, president; J. F. Jacobs, Clinton, vice-president; Horace Payne, of Florida, secretary and treasurer, and Edward Renault, manager.

Members of the board of directors of the new company would be: F. B. Burns, Middletown, Conn.; J. F. Jacobs, Clinton; Horace Payne, Edward Renault, Middletown, Conn.; W. J. Bailey, Clinton; T. D. Cope-land, Clinton, and C. M. Bailey, Clinton. The new Clinton industry is to be known as the Clinton Manufacturing Company and is to specialize in the manufacture of laces containing cotton and mohair, window curtains or draperies and novelty goods of this type. It is to be organized under the South Carolina laws, and a site for the plant has already been selected at Clinton, Mr. Jacobs announced.

Goods to be made by this company are manufactured under patents now held by the Burns Company, which will be turned over to the new organization immediately on the completion of its formation, Mr. Jacobs announced.

The present Burns plant, Mr. Jacobs explained, would be continued in operation at its present site until a number of lace making machines equal in number to those in the Burns Company's Connecticut plant have been imported from England and installed in the new building at

Clinton, and when these have been set in operation, those in use in the Connecticut plant would be brought to the Clinton headquarters of the company.

The new building itself will be two stories high, 75 feet high by 215 feet long and of brick construction. In addition to the steel bar lace making machines, it will house facilities for both rayon and cotton goods dyeing, this work to be cared for through the surplus capacity of the dyeing section of the plant. The total stock subscription of the proposed new company is to consist of \$150,000 of common stock and \$100,000 of 7 per cent cumulative pre-

ferred stock. Of this total capitalization of \$250,000, Mr. Burns will put up in cash \$125,000, while the remainder is to be offered for subscription in the city of Clinton.

Burlington, N. C.—The Vis Tex Mills, of Philadelphia, have leased a building here and will install equipment for winding and coppering rayon. The machinery will be placed as soon as the building undergoes the necessary alterations. It is expected that the plant will be in operation by the first of October. It will be in charge of E. E. Eteiller, who will come here from Philadelphia.

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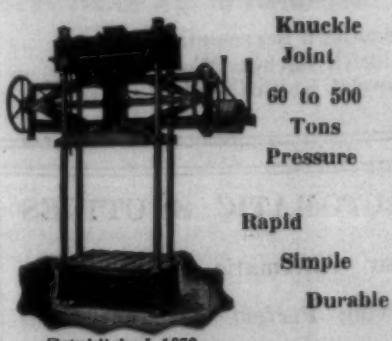
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Georgia Massachusetts North Carolina South Carolina

Mill Statements of Conditions

THE Boston News Bureau carries in each issue statements of various industrial plants relative to conditions of their trade.

In a recent issue they carried the following reports:

The Griffin Manufacturing Co., colored cotton goods and napped fabrics, Griffin, Ga.:

We have sufficient business on our books to assure full time operation during the next three and a half to four months. Prices are exceedingly low, and at present, business is very quiet. Prices offered would reflect a loss on present basis of cotton.

Stocks of goods in our plant have been reduced during first five months, but at extremely low prices. Margin of profit is very close on present business. We believe that, if cotton holds around present prices, goods values must advance, or mills cannot operate on profitable basis with such a wide difference.

Customers have been making purchases conservatively for last two years; orders have mainly been small, and mills have had to carry burden of heavy inventories.

We believe basic conditions in textile industry are very sound, and that we will see some improvement in demand and prices.

Eagle & Phenix Mills, cotton goods, Columbus, Ga.:

"Of course, you understand Eagle & Phenix Mills are manufacturers of colored cotton piece goods, together with ball thread and cotton rope, and any information we might give you of course would be based on conditions applicable to line of business.

As to cotton crop for 1927-1928, it is almost impossible to make any forecast as to what the crop will be, as oftentimes a crop is either made or lost during July and August. We think that at this season of the year no one can forecast with any degree of accuracy what the new crop will be, but if weather conditions are ideal, we think that another good crop will be made this year, but if we have a considerable amount of rain and weather conditions are adverse, the crop will not be so large.

As to prices on our line of fabrics, they have been very unsatisfactory, as within last 90 days we have had an increase of 3 to 4 cents a pound on cotton, whereas the prices on manufactured goods have in very little.

We are operating on full schedule, and hope to continue. Labor conditions are about the same as they have been for several years past, and as we have never had any labor disputes, we think that present scale will continue.

FABREEKA

*The Standard Textile Belting
USED throughout the Industry*

BECAUSE

It is waterproof
It has long life
It gives increased production
It costs less

ASK US

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Z. V. McClure Representative
Ralph Morrison Representative
Robert M. Roberts Representative

Fabreeka Belting Co.
Southern Headquarters, ROCK HILL, S. C.

Thursday, August 4, 1927.

Visiting Europe

(Continued from Page 18)

country in the world to try their luck at the various games and but few ever depart as winners.

I wanted to see Monte Carlo and to be able to say that I had played its games but I regret that I did not see it in full season.

On Wednesday we saw Nice and some of our party went in bathing on the beach opposite our hotel but the glare on the beach was so bad that I did not join them.

We wanted to get back to Paris without wasting a day, but the only sleeper we could get cost \$20 per person, in addition to railway fare, for a berth.

It looked foolish to pay \$100 for five of us but we would have had the expense of staying over and we decided to pay the price.

We left Nice at 4 p. m. on the

De Luxe train for Paris and arrived there at 10 a. m. the next morning and went to the Continental Hotel, where we had stored part of our baggage when we left for Switzerland.

(To Be Continued)

Larger Profits Standard Textile Products Co.

Net operating profit of \$218,084 is reported by the Standard Textile Products Company for the three months ended July 2, 1927, compared with \$151,724 for the first quarter and \$114,649 for the entire year of 1926. Gross sales for the second quarter totalled \$3,980,409 against \$3,774,186 in the preceding three months.

"Business during the second quarter," James T. Broadbent, president of the company, reported to stockholders, "has been maintained on a

capacity basis and orders are still being received in excess of normal for this season of the year. Consequently unfilled orders are greater than at this period for some years.

"During the last quarter there has been a further reduction in inventories, which, together with operating profits, has permitted us to reduce our bank loans \$1,000,000. Therefore, we are entirely clear of notes payable to banks as of July 2, 1927. Bonded indebtedness was also reduced by \$244,000.

"The net amount added to stockholders' equity during the last quarter, after interest and depreciation, namely, \$237,634, represents net operating profit of \$218,084 plus discount on bonds purchased for retirement of \$19,550. The total addition to stockholders' equity for the first six months of 1927 is \$398,818, or \$83,818 over six months' requirements for the preferred 'A' and 'B' stock dividends."

Boll Weevil Infestation Increases, Survey Shows

Washington, Aug. 4.—Increasing boll weevil infestation was indicated in the Department of Agriculture's report today covering the period to July 15.

College Station, Texas, reported that at 50 points 16 per cent of the squares were punctured. Baton Rouge, La., reported that in central and southern Louisiana infestation was decidedly spotted. Tallulah, La., reported infestation averaged 19.5 per cent. The Mississippi A. & M. College reported boll weevils nearly four times as numerous as at this time last year. In that State, 95 farms in 22 counties reported an average infestation of 11 per cent compared with 3 per cent last year.

Alabama reported an infestation of 17.2 per cent and infestation increasing gradually. Florence, S. C.,

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SLUBBERS
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WARP
TWISTER
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Our Automatic Shuttles are giving Perfect Satisfaction in Leading Mills throughout the country on all classes of work.

reported an average of 15.5 per cent infestation. The weevil was reported quite active in the southern counties of North Carolina but not so severe in the lower Piedmont counties.

Overseers Have Barbecue.

The overseers, second hands and section men at the Eagle Cotton Mills Company, Madison, Ind., were recently tendered a barbecue by Superintendent G. W. Roper and Mrs. Roper, the event being given to celebrate the biggest half year production that the mill has gotten in many years. The barbecue was held at Clifty Park, near Madison, had proved a very enjoyable occasion.

Covington Heads Rotary Club.

I. B. Covington, superintendent and manager of the Wade Manufacturing Company, at Wadesboro, N. C., was unanimously elected president of the new Rotary Club that has just been organized in his city. The membership in his club includes a number of men of statewide reputation in business and politics.

Gibson Undergoes Operation.

W. H. Gibson, Jr., superintendent of the Aileen Mills, Biscoe, N. C., underwent an operation for appendicitis at the Presbyterian Hospital in Charlotte on Monday of this week. He is reported as doing very well since the operation.

David Clark and Luther Hodges Go To Chicago

DAVID CLARK, editor of the Southern Textile Bulletin, and Luther Hodges, assistant manager of the Carolina Cotton and Woolen Mills, will both leave for Chicago on Friday of this week to attend a District Governors' Conference of Rotary International.

Mr. Hodges is Governor of the Fifty-seventh District and Mr. Clark is Governor of the Fifty-eighth District.

The Chicago Conference will not only be attended by the District Governors from the United States but those from Spain, Holland, South Africa, Switzerland, New Zealand, France, Italy, Cuba, Mexico and Chile.

Large Sales Again Reported

"Our sales for the week have again been large, and the total yardage sold has been approximately the same as last week," said one of the largest cotton goods houses in advises to its mill agents. "Colored goods showed a healthy increase with a wide distribution in both the domestic and export trades, and the total yardage sold was considerably in excess of production; we advanced the price on staple ginghams $\frac{1}{2}$ cent a yard.

"Our fine and fancy goods department broke their record for any week this year, large sales being made on silk and cotton mixtures, broadcloths, shirtings and special constructions."

"There has also been considerable activity on sheets and pillow cases, with an advance in price in a number of lines. Further advances of $\frac{1}{2}$ cent to $\frac{1}{4}$ cent a yard were made on print cloths, and certain constructions are scarce for spot delivery; spot goods are bringing a premium or $\frac{1}{2}$ cent to $\frac{1}{4}$ cent over contracts.

"Sheetings have advanced $\frac{1}{2}$ cent to $\frac{1}{4}$ cent a yard on various constructions, and we have advanced some drill constructions $\frac{1}{2}$ cent a yard. Buying has been more or less general in all lines and has been well distributed.

The recent trade reviews are more encouraging. Steel, textile, hides, leather, and footwear are mentioned as showing improvement, and stress has also been laid on the fact that firmness of wholesale commodity quotations is increasing. This week will bring reports from most of the larger steel companies, and the United States Steel Company is expected to report better results than for the first quarter. Sentiment toward steel stocks generally is improving.

"At the beginning of the year a moderate recession in building was generally expected, which was supported for the first two months by a decline in contracts awarded. Since then building has shown evidence of stabilization, and each succeeding month has exceeded by a small margin the corresponding month in 1926, so that a new high record of contracts awarded was made. The total for the first six months was 2 per cent above the first six months of last year, and indications are for a well sustained volume of construction for the balance of the year.

"For the last few years there has been some danger of inflation by reason of extended installment buying, but most of the dangers anticipated have been met by wise business administration. The very strong financial position of some of the large companies and the gradually restricted credit of some of the smaller ones by the banks have gone a long way toward correcting this situation. It is pointed out by some of the sound economists that installment buying properly conducted is economically helpful.

"After a discouraging start, the current crop season has assumed a more favorable aspect during the last few weeks. Despite the handicap imposed by the Mississippi floods and the unseasonable weather in many other important farming sections during the early part of the year, the present condition of most of the leading crops is fairly good. Moreover, the outlook for farmers' earnings has been improved by the advances in price of many products.

"During the week we have talked with a number of customers from the Middle West, Northwest and Kansas City sections, and they are all optimistic over the outlook for fall business. Judging from our standpoint, it would seem that the general business of the country is shaping up very nicely, and, barring anything unforeseen, we believe we should continue to have a satisfactory volume on cotton goods with prices gradually working more on a basis with the raw material."



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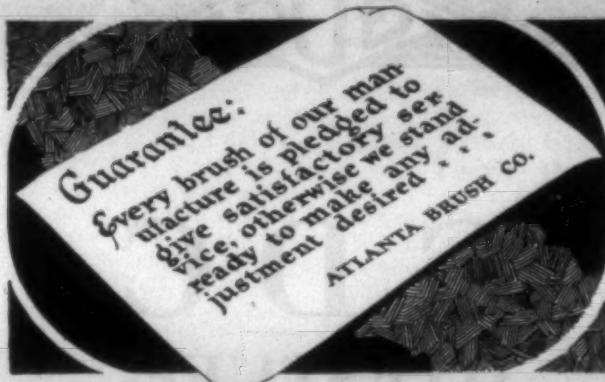
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111 Arch Street

PROVIDENCE, R. I.
40 Fountain Street

SAN FRANCISCO, CALIF.
22 Natoma Street

GENERAL DYESTUFF
CORPORATION

Thursday, August 4, 1927.



Once upon a time the purchasing agent for a large textile plant laid down all the different makes of textile brushes side by side. He spent hours trying to figure out which brushes would give the best service. He compared quality and workmanship. As a matter of fact, they all looked very much alike. Then he read the Atlanta Brush Co.'s guarantee.

This guarantee settled the problem for him. It took all the guesswork out of his buying. Perkins Practical Brushes have to be the best or we couldn't stand behind them with this iron-clad pledge of satisfaction.

For every textile need, we make a suitable Brush

Atlanta Brush Co. Atlanta, Ga.

Guaranteed
Textile
Brushes

Moreland Size, Inc.

"The Warps Best Friend"

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Office: 206 Andrews Low Bldg.

Spartanburg, S. C.

S. C. THOMAS & J. T. MORELAND, Owners

Finishing Processes Of Cotton Fabrics

(Continued from Page 21)

tions and that caused during bleaching, dyeing, or finishing.

There is no other single test which yields so much information respecting the effect of chemical treatments on the textile quality of cotton, and the time is certainly approaching when for certain purposes finished fabrics will be bought and sold to a viscosity standard, as is already the practice for wood pulps.

In some processes, such as the development of vat dyes and the production of indigo discharge prints, cotton materials are submitted to the action of bichromate, and the effect of this chemical agent on the textile quality of the fibre is particularly subtle. It is possible for cotton to suffer considerable chemical attack by the action of bichromate on it, and yet for its strength to be tendering entirely escapes notice in so little affected that the slight normal routine practice. If, however, the material is subsequently submitted to mild laundry treatment, or even if it merely boiled with water, it suffers an enormous loss of strength. The damage caused by the chemical agent remains concealed till the cotton is boiled, when it may easily lose 50 per cent or more of its strength. It is one of the most triumphant vindications of the viscosity measurement as a method of control in finishing processes that the damage caused by injudicious use of bichromate, though only latent in the tensile test, is immediately detected by the very low viscosity of the cotton in cuprammonium solution.

It is a remarkable fact that in spite of an accelerating stream of scientific investigations on cotton the gap between technical achievement in the finishing industries and exact scientific analysis of the processes concerned remains as great as ever, if, indeed, it does not actually widen. During a period of development which has taught the practical finisher to enable cotton fabrics with many of the qualities of wool and silk, the scientists have been greatly concerned to explain the effects produced by adding salt to a dyebath—effects which have been utilized in practice since the art of dyeing was in its infancy. The scientist certainly appears behind the times, but in all justice let it be admitted that he always does. Some branches of dyeing and finishing were already perfected arts when the candle's fate after it was burnt was still a subject for scientific speculation. It is nevertheless an indisputable fact that many of the newer developments in cotton finishing owe their inception and inspiration to purely scientific work, the practical value of which, in this sense alone, cannot be over-estimated. Science is invention's fingerpost.

Textile School Co-Operates With Mills

During the past year the Textile School of N. C. State College has co-operated with a number of mills

in the State and has assisted them in making a variety of tests on yarns, fabrics, dyes, etc. A list of the work done is as follows:

Breaking strength of absorbent crash, comparative dyeings, breaking strength and evenness of yarns, cause of weakness in rayon yarns, obtain original weight and size of yarn, salt tests made for acidic constituents, breaking strength of yarns, streaks in hose, general analysis of piece goods, breaking strength of rayon and hose, faults claimed in yarn, complete analysis on tobacco cloth, analysis of bleached cotton, comparative tests of yarns, comments on textile mill crayons, dye analysis, analysis of size compounds, analysis of noils, obtaining viscosity of starch, analysis of different brands of rayon.

Equipment in research laboratory is as follows:

Balances, twist counters, yarn reels, roving and yarn scales, yarn inspector, single thread tester, fibre testing machine, micrometer, Muller ester, portable humidifier, Emerson conditioning oven, power yarn and cloth testing machines with autographic recorders, micro-photographic outfit.

This equipment is used to make tests on yarns and fabrics and for other tests and research.

Equipment in experimental room is as follows:

Opening and picking machines, card, drawing frame, slubber, intermediate, fine frame, jack frame, spinning frame equipped with Casabancas system of spinning, spinning frame equipped with Roth-Saco-Lowell and four roll spinning, spinning frame for short or long staple cotton, combers.

This equipment will be used for making yarns to be tested for breaking strength, elasticity, and evenness under conditions comparable with mill practice, also yarns spun on different processes so as to make comparisons of the yarns produced, or other tests that are suggested. These tests will be made from cotton supplied by mills and the State College Experimental Farm. The experimental room is placed at the disposal of mills desiring to make their own tests.

Record Cotton Year Shown

Washington.—Exports of American cotton for the cotton year which came to an end July 31 will total something more than the 11,185,712 bales reported to July 29. Of this amount 250,000 bales were linters. During the same period last cotton year the exports amounted to 8,148,002 bales, including about 95,000 bales of linters.

This cotton year has been a record-breaking one from the standpoint of production and domestic consumption as well as exports. The manner in which prices advanced in face of an enormous crop also is a matter of comment.

The trade now is awaiting the announcement from the Census Bureau, Department of Commerce, as to the carryover and the August forecast by the Crop Reporting Board, which will be based on the condition of the cotton crop as of tomorrow. During the 1926-27 crop

year the visible supply of cotton, figured at 21,500,000 bales, was increased by 375,000 bales of imported lint. It is predicted that it will be found that the carryover will run about 3,725,000 bales of this year's crop, with a like amount represented by the carryover in Europe of American cotton. Domestic consumption is expected to amount to about 7,250,000 bales.

Private estimators are figuring the new crop at from 14,300,000 bales to 14,900,000 bales. If the farmers this year make something like 15,000,000 bales and there is the carryover predicted the question of absorption of 18,725,000 bales will be something to think about, since there is said to be an additional 3,725,000 bales carryover abroad, making the visible supply 22,450,000 bales. European consumption of American cotton this last season apparently has totalled about 7,725,000 bales. If this is repeated during the coming twelve months and the consumption by American mills remains the same, 14,500,000 bales will be disposed of, with a carryover at the end of the year perhaps a little larger than the one anticipated as of today.

The outlook is not considered so bad from a producers' standpoint. He who makes a good crop of cotton this season in face of the boll weevil menace, it is said, may expect to make something with which to pay off last year's bad debts. The situation in the Mississippi Valley, of course, is not very hopeful since where the farmers were washed out it will not be possible to make a crop, but elsewhere conditions are reported to be more rosy.

It is indicated here that it is believed that if the distribution of the forthcoming crop is as free as the past crop money will begin to flow south. Cotton prices, in face of last year's difficulties, advanced from 11 cents per pound in December to about 18 cents per pound by the middle of July, with new crop cotton a half cent more.

Durham Hosiery Mills Show Activity

Durham, N. C.—The hosiery mills of Durham are experiencing their best summer season in a number of years. All of them are busy, putting in full time and are finding an excellent demand for their product. Practically all kinds and grades of hosiery has been a poor seller but manufacturers of this grade do not have any complaint to make with the demand now.

The fancy cotton hosiery of the better grades always has sold fairly well and most of the mills are now equipped to turn out this product. Mixed goods and the silk goods have sold well all the time and it was these lines largely that kept the mills going in the lean years just passed. The full-fashioned plants had all they could do in the years when the demand for cotton goods were light, and they are still busy, but they have not been called upon for an increase in output to the extent that the cotton plants have.

Reports from Burlington indicate the same measure of prosperity

among the hosiery mills there as is evident here. All the mills there are operating full time, some of them on double shifts. A number of new plants are under way or contemplated and others are enlarging. The Burlington product, as well as the Durham product, is sold all over the country and in many foreign countries, and the present prosperity of these mills is an indication that the country as a whole is prosperous, according to the view of local manufacturers.

Textile Industry Offers Many Opportunities

The textile industry has offered better opportunities to young college men during the years since the World War than it ever did before the war, according to a vocational study of the textile graduates of North Carolina State College just completed by Professor T. R. Hart of that institution.

The total number of textile graduates from State College is 252, and of this number 177 or 70 per cent are in the textile industry. Many of those men hold good positions.

Three of the textile alumni are presidents and four are managers of textile corporations, while three are general superintendents and sixteen are superintendents. There are six men holding the position of secretary-treasurer and twelve are assistant superintendents of textile corporation. Nineteen are overseers in cotton mills and dye plants and eleven are textile designers. Many other alumni hold good positions.

The salaries paid the men holding the above positions are large and the average annual income received by the textile graduates of North Carolina who have stayed in the industry is considerably above the average earnings of college graduates throughout the country.

Young men who are now trying to decide on a professional career before entering college this fall, or before continuing their college work, will be interested to learn that there is a strong demand for the graduates of the State College textile school. Dean Thomas Nelson, says he is still receiving requests for graduates of this past year's class, although all the members of that class were placed by commencement.

H. W. Butterworth, Sr., Made Chairman of Board.

Harry W. Butterworth, Sr., who has been president of H. W. Butterworth & Sons Co., for 21 years, has been elected chairman of the board of directors of the firm, an office just recently created.

A. W. Butterworth, former vice-president, was made president and treasurer. J. Ebert Butterworth, formerly treasurer, was named vice-president in charge of the Southern office in Charlotte. The former secretary, Harry W. Butterworth, Jr., was also elected a vice-president and DeHaven Butterworth, who was assistant secretary was made secretary, while James W. Butterworth, 2nd, will continue as assistant treasurer.

SUPERINTENDENTS AND OVERSEERS.

We wish to obtain a complete list of the superintendents and overseers of every cotton mill in the South. Please fill in the enclosed blank and send it to us.

1928

Name of Mill _____

Town _____

Spinning Spindles _____ Looms _____

Superintendent _____

Carder _____

Spinner _____

Weaver _____

Cloth Room _____

Dyer _____

Master Mechanic _____

Recent changes _____

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Duplan Silk Corp.	20	Sprauing Painting & Finishing Equipment Sales Co.	10
DuPont de Nemours, E. I. & Co.	9-33	Stafford Co.	33
—E—	—	Steel Heddle Mfg. Co.	17
Eastwood, Benjamin Co.	—	Stein, Hall & Co.	—
Eaton Paul B.	34	Stone, Chas. Co.	26
Eclipse Textile Devices, Inc.	—	Syndor Pump & Well Co.	—
Economy Baler Co.	42	—T—	—
Emmons Loom Harness Co.	39	Terrell Machine Co.	—
Entwistle, T. C. Co.	—	Textile Finishing Machine Co.	—
—F—	—	Textile Mill Supply Co.	—
Fabreka Belting Co.	25	Timken Roller Bearing Co.	—
Fales & Jenks Machine Co.	—	Tolhurst Machine Works	—
Farish Co.	24	Tripod Paint Co.	39
Ferguson Gear Co.	—	—U—	—
Flexible Steel Lacing Co.	—	United Chemical Products Co.	43
Ford, J. B. Co.	34	U S Bobbin & Shuttle Co.	13
Foster Machine Co.	—	U. S. Ring Traveler Co.	38
Franklin Process Co.	—	Universal Winding Co.	38
—G—	—	—V—	—
Garland Mfg. Co.	—	Victor Ring Traveler Co.	—
Gastonia Belting Co., Inc.	34	Fred'k Vleter & Achelis	24
General Dyestuff Corp.	27	Vogel, Joseph A. Co.	—
General Electric Co.	27	—W—	—
Georgia Webbing & Tape Co.	—	Washburn Printing Co.	29
Gildgen Co.	—	Washburn, Inc.	—
Gratton & Knight Co.	—	Watts, Ridley & Co.	37
Graystone Inn	32	Wellington, Sears & Co.	36
Greist Mfg. Co.	34	Westinghouse Electric & Mfg. Co.	—
Greenville Belting Co.	—	White, Fred H.	—
Harris, A. W. Oil Co.	32	Whitton Machine Works	—
H. & B. American Machine Co.	14	Whitinsville Spinning Ring Co.	34
Hollingsworth, J. D.	—	Wickwire-Spencer Steel Corp.	—
Houghton, E. F. & Co.	4	Williams, J. H. Co.	—
Howard Bros. Mfg. Co.	2	Wilson, Wm. & York, Inc.	37
Howard-Hickory Machine Co.	—	Wiltz Veneer Co.	—
Hunt, Rodney Machine Co.	—	Wolf, Jacques & Co.	—
Hyatt Roller Bearing Co.	—	Woods, T. B. Sons Co.	—
—I—	—	Woodward, Baldwin & Co.	36
International Salt Co., Inc.	—		

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Pomona, N. C.

Nurserymen—Landscape Architects

Controlling Cotton Warp Sizing Pays Dividends

(Continued from Page 14)

in a separate room from the slashing and the man was an old employee, the foreman said he "had supposed Harry knew his job and was doing it; therefore, he didn't go in there very often." As a result, the boss slasher lost his job. It was not due to his lack of knowledge, because he was a capable man, but entirely to lack of knowing what was going on in his department and properly controlling it.

Case No. 3. Uneven Weights Due to Varying Temperatures in Size Boxes.

A very large mill had been making a standard print cloth. The foreman of the slasher room, an experienced man, knew the importance of keeping the temperature of the sizing solution constant in size boxes. He, therefore, had an old employee going constantly around with a thermometer, checking up the temperatures.

A wave of "economy" suddenly came over the foreman. He discharged the old man and told each slasher tender that he would be responsible, but he did not check up on them himself or have his second hand do it as that "was not their job." With a few exceptions, the slasher tenders did not watch the temperatures as they had not been accustomed to do so. In time, there were complaints that "the weight was all over the lot."

Analysis of the cloth proved that the ends, picks, and yarn sizes were as they should be, but that the weight varied greatly both above and below the specified amount.

Investigation showed that the temperatures in the boxes were varying as much as 40 degrees, nothing else was wrong in the slashing, and that this was the cause of the yarns taking on more or less starch than they should with consequent weight variation.

If the foreman, or second hand, had watched and checked up on the slasher tenders and controlled the temperatures, the trouble would never have occurred.

Case No. 4. Increase in Seconds by Sudden Lowering of Temperature of Solution in Size Box.

A certain mill had reduced its seconds on the cloths they made to a very low point. One day a weaver complained of a certain warp running badly, soon another and another until finally there were many running poorly with a great increase in seconds. It kept up. No one could find the trouble. The warp yarn was tested for twist, size and strength, and found to be satisfactory. There was no more tension on the warp than formerly. The humidifiers were working properly and still the trouble continued.

Someone suggested that the slashers might be out of order. They were inspected and found to be in good condition. It was finally discovered that the slasher tenders were letting the level of the size solution in the box get very low be-

fore refilling and that the temperature of the size entering the box was much lower than it should have been. This cooled off the solution in the box so that the warp yarns were not properly sized, which caused trouble in weaving.

The definite control of the temperature of the entering size solution corrected the trouble at once.

Case No. 5.

"Blotchy" Appearance of Gray Cloth Because of Poor Mixing of Size Solution.

A great many buyers of gray cloths being almost entirely ignorant of how to really judge weaving quality, buy on appearance only. A certain mill had been selling a converter very large quantities of print cloth. The buyer wanted a little different cloth from which he formerly purchased and asked the mill to submit a sample cut. At the same time the selling agent of another mill, from whom he had never bought, was requested to submit a sample cut.

Both mills furnished sample pieces. The one from his regular mill appeared shady and "blotchy" in places, while the sample from the new mill was a fine, even piece of cloth. The new mill obtained the order solely on the appearance of the fabric, because the buyer thought the yarns were even. In reality the poor looking fabric was a better cloth in every way.

Investigation showed that the shaded and "blotchy" appearance was entirely due to improper mixing and dissolving of the ingredients used for the sizing solution. The uneven size naturally went on the yarn unevenly. It was found that the man in charge of the mixing had no definite instructions as to what he had to do and "used his own judgment." From that time on, framed typewritten instructions were hung on the wall and his work was carefully checked.

Lack of control was the cause of losing a large order and a good customer.

Case No. 6.

Changed Appearance in Yarn Dyed Dress Goods Due to Too Much Tension in Slashing.

A mill making fine yarn dyed dress goods of various kinds had been quite successful in producing a certain material.

One day a complaint was received from the customer that the jobbers and cutters-up were saying that the goods were "lean, scrawny, like a rag, like a screen," etc., "not what you originally sold and delivered," and that they could not use the materials.

A comparison of the cloth proved it to be exactly the same as to cloth count, yarn, etc. The amount of sizing material, however, was very much less than the proper amount.

Investigation showed that the foremen in the mill had been told to do all they could to "speed up production." The man in charge of the slasher department took the order literally and inasmuch as the warp yarn in the particular goods happened to be two-ply, strong, and with a large amount of ply twist,

he decided to run the warp faster through the slasher. This he could do and did because of the large drying capacity of his new slashers. However, he did not call the superintendent's attention to the effect of this speeding up. The production on slashing these warps shot up and the cost of slashing went down.

After weaving, the goods were finished by simply wetting out and drying on a can dryer. In the satisfactory cloth, there was enough sizing material to fill up the cloth and give it the proper feel, or handle. The percentage of starch being very low in the unsatisfactory fabric, there was little to run, and the goods came through as the customer complained, i. e., "lean, scrawny, and like a rag."

In order to speed up production, the slasher foreman not only speeded up his machines but had to put more tension on the warp yarns. The yarn was therefore pulled taut and was not so long in the size solution. These things, coupled with the fact of the yarn being two-ply and having a large amount of twist, prevented it from taking the proper amount of size. In weaving, no trouble was experienced on account of the natural strength and smoothness of the yarn, and because the cloth happened to have a small number of ends per inch in the reed.

If the foreman had thought first and acted afterwards, he would have controlled the amount of sizing on the warp yarns. Then he still would have been able to have increased the speed of his slashers, and no trouble would have resulted.

Case No. 7.

Bag Unsatisfactory Because of Poor Condition of Squeeze Rolls.

A manufacturer of cotton bags had developed his business to a point where he was able to obtain a premium over other manufacturers as his cloth was so uniform that no material ever sifted through. Then for the first time in years, his customers began to complain of the unevenness of the cloth and the bags were losing their contents because of the material working through.

Analysis of the cloth showed it to average the same as to cloth count, yarns, etc., but the strength varied considerably. Wherever the cloth seemed thin, or flimsy, it had a low bursting strength. It was also ascertained that in the thin appearing places there was less sizing material. As they appeared to run lengthways of the fabric, the slashing room was immediately investigated.

It was found that the squeeze rolls on the size boxes of the slashers had been allowed to get into very bad condition. Consequently, to dry the yarn too great a pressure had been used.

Some of the warp yarn was therefore being loaded with size, and some was squeezed so hard that it was practically free from size. The high quality of the warp yarn, the excellent condition of the looms, and a particularly good humidifying system enabled the cloth to weave

without giving any noticeable trouble.

When the squeeze rolls were put in proper condition, the cloth came through O. K. Better supervision and control of the slasher room would have completely avoided the trouble.

Although perhaps a hundred actual cases of troubles, financial losses and loss of sales can be traced to lack of definite control, or some fault in slashing, only a few have been mentioned as it is felt they very plainly show that in these days of severe competition, painstaking care must be used at all times.

No matter how excellent the warp yarns may be and how well a superintendent, or slasher foreman, knows how to slash cotton warps, if there is not the proper control at all times over machines, materials, methods, and men, trouble is bound to occur.

The writer, therefore, feels that the process of slashing should be given much more attention. He also feels that the position of slasher foreman is a much more important one than the average mill man appreciates. To properly slash warps day in and day out so that no trouble will occur from this process, requires not only a skilled and experienced knowledge of how it is done but a constant definite control of all things at all times. Then, and only then, will the troubles and financial losses due to improper sizing be eliminated.—Black and White, published by E. F. Houghton & Co.

N. C. Mills Use the Most Cotton

North Carolina mills used 149,810 bales of the 273,414 bales of cotton consumed in June by the three textile manufacturing States of the fifth federal reserve district, says the district report. South Carolina consumed 411,751 bales and Virginia mills 11,853 bales of the total.

In comparison, during May the mills of the district consumed 264,507 bales and in June, 1926, 212,398 bales. The mills, says the report, are operating approximately full time and having in hand a larger volume of forward orders than for several years, are shipping the goods as made and are accumulating little stock in their warehouses.

Due to the steady rise in cotton prices during the recent months, it is stated, many mills report that they are shipping goods on orders previously accepted at less than replacement costs, although some profit is being made on the business, the goods coming from cotton bought before the advance in price.

Most of the textiles recently sold, it says, appears to have gone into the hands of consumers, stock figures received from wholesale dry goods jobbers and department stores indicating little accumulation of goods in secondary hands. On the whole, it concludes, the fifth district textile industry appears to be in about the most favorable position it has occupied since early in 1920.

In reference to crops, the report says North Carolina farm conditions are vastly better than on June 1, following the breaking of a long drought.

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Dyeing of Artificial Silks

(Continued from Page 12)

From these remarkable researches, in which the American chemists have done a big work, three practical processes are now applied to aceto silk.

(1) The celanese process with celanese dyestuffs, cibacet dyestuffs, etc. With some of these dyestuffs occurs the phenomenon called "phototropy." The shadow causes a darkening of the color which remains when the shadow disappears, but this darkening is not permanent.

(2) The development process gives also fast dyes on aceto silk.

(3) The vat dyestuffs. These dyestuffs are dissolved as leuco derivatives in alkaline baths and we know that alkaline baths cause aceto cellulose to be saponified. A remedy has been found to protect aceto silk against alkaline action. Glue and starch are good protectors and the sulfite liquors from pulp manufacture give also good results.

In these different processes the temperature of the dyeing baths does not exceed 80 deg. C.

C—Appliances.

With all these kinds of fibres, viscose, aceto silk and the natural fibres, cotton, wool, natural silk, we can work every kind of yarns, tissues, clothes, etc. Aceto silk can be manufactured in as thin a state as natural silk and artificial silk as copper silk is able to give a coarse thread like a horse hair (erinoid). Previously "crepe de chine" was made from natural silk only; now it is possible to manufacture it with aceto silk. Recently, French manufacturers have made splendid "crepe de chine" with artificial silk. With all the processes of dyeing we have mentioned, we can easily dye the different kinds of fibres in the same color or each kind of fibre with different colors. Here is a sample of tissue made of viscose, aceto silk and natural silk. In the same bath, we put a solution or suspension, cibacet blue, cibacet yellow, chlorantine red and after dyeing we have this beautiful combination of colors. On the tricolored sample, cibacet blue and yellow give with aceto silk a splendid green, chlorantine red gives on viscose a beautiful red and natural silk is dyed with the three colors, in black. This sample has been dyed by my colleague and friend, Mr. Leclarec of Lyons. I have here also many beautiful samples made in Lyons by the firm Henri Bertrand & Fils.

The Situation in Cotton Goods

The following summary of the cotton goods industry was published in the business of The National City Bank of New York for July:

"The cotton goods industry continues its demonstration of a remarkable comeback. A year ago this industry was in the depths of discouragement, with several years of poor business behind, and apparently little to look forward to in the immediate future. Then came the drop in raw cotton which proved to be the spark that has given it renewed life. With raw cotton down

to 12 cents a pound, as compared with 20 to 25 cents before last year's big crop, merchants everywhere began to regain confidence both in the raw material and in cotton goods, and to replenish stocks which had been allowed to run down to the minimum. As cotton has crept upward in price this spring, confidence has grown, and hand-to-mouth buying of cotton goods has given way in many instances to forward ordering, and many mills are now well sold ahead for the first time in years.

"This decided recovery of activity is strikingly shown in the statistics of the industry. Consumption of raw cotton by domestic mills has reached record breaking levels, exceeding the totals of a year previous in every month since July, 1926, while for the cotton years to date the total shows an increase of 495,342 bales. The figures on spindle activity have shown over-time operations in every month since November, 1926, and at the end of May were at the rate of 109 per cent of single shift capacity, compared with 88.9 per cent on the corresponding date of 1926.

"It is not to be inferred from this, of course, that all sections of the industry are sharing equally in this recovery. Most of the over-time is taking place in the Southern mills, though operations in New England have also improved. There is still, however, much idle machinery in that section and the process of mill liquidation is still going on.

"Besides the increase in domestic consumption exports have been moving in far larger volume, the total since August 1, amounting to 10,313,000 bales, or an increase of 2,870,000 bales over the corresponding period of last year. Thus, counting domestic consumption and exports, the combined movement to date has accounted for approximately 16,283,000 bales, or 3,365,000 bales more than a year previous at the same date.

"It is true, of course, that cotton exports do not represent final consumption, and it is significant that actual foreign mills takings of American cotton have thus far increased only 1,990,000 bales over last year, the balance of the cotton apparently going into stock. To the extent that cotton is bought ahead now, it may mean diminished buying later. The expectation, however, is that the lower price will accelerate the movement of goods into final consumption.

"As to the goods situation in this country, the figures published by The Association of Cotton Textile Merchants of New York are most illuminating. These figures show increases in sales and in unfilled orders over a year ago which are remarkable to say the least, substantial increases in production and shipments, and a large reduction in stocks.

"Analyzing these figures, it is clear that so far as the mills are concerned there has been no accumulation of goods in stock despite the increase in production. Explanation of the record-breaking mill sales undoubtedly lies in part in a larger movement of goods into consumption, one important outlet being the chain stores which by reason

of the lower prices have been enabled to place on their counters a large variety of cotton cloths. Allowing, however, for a liberal increase in consumption, it is nevertheless evident both from the magnitude of the sales figures and from the large increase in unfilled orders that sales are running ahead of current consumption and expressions of apprehension are not lacking that the present activity will be overdone. One fact that should be borne in mind is that much of the cloth now being produced has been manufactured from cotton bought at much lower prices than those now current. In other words a great deal of cloth is being distributed at below reproduction costs, and unless goods prices can be advanced to levels commensurate with the recent advances in the raw material the industry will find itself once more in difficulties."

Weevil Damage and Date of Frost Will Decide Size of Crop

"In our opinion the size of the cotton crop this season ultimately will be determined largely by the extent of weevil damage and the date of killing frost," comments G. T. Revere, of Munds & Winslow. "The frost date is important for the flooded districts of the Mississippi valley and in west Texas, where the crop is known to have had an unusually late start.

"Since the practical attainment of the 19-cent level there has been more of a two-sided market in cotton with a disposition on the part of traders to take profits and await further developments. Some of the selling toward the close of the week also has borne earmarks of hedge sales against new crop purchases. The volume has not been large, but the operation naturally is a reminder of the oncoming movement which should begin to be of respectable proportions by the beginning of autumn.

"Developments in respect to the crop have not been conclusive. Showery weather has continued in the Atlantic States and portions of Alabama, with high temperatures and intermittent showers furnishing the weather features west of the Mississippi. The weekly weather report was of a somewhat favorable average, although the persistent mention of increase in weevil infestation carries a threat which the trade is not disposed full to ignore.

Weevil Reports Confirmed.

"The report on weevil infestation issued by the Department of Agriculture last week was rather inconclusive, except in that it confirmed the prevalence of the pest over a wider area than was the case last year. Our reports from Dr. George D. Smith who has been traveling throughout the cotton belt are more confirmatory of the possibilities of weevil damage as the season advances. His previous advices have been to the effect that infestation while increasing in the eastern belt, was, nevertheless, more or less spotted. His forecast issued in April noted the likelihood of largely increased infestation in Texas, but

rather held to the view that damage could not be extensive unless weather conditions were decidedly unfavorable. Dr. Smith's survey of present weevil conditions in Texas will not be completed for several days. We therefore do not think it advisable to form any conclusions from local observations, and prefer to wait his full report.

"We might state, however, that his observations regarding conditions in the Brazos Valley district fully confirm claims of serious damage. From Beeville and Victoria, north to Austin, severe injury has been caused by the weevil, with not more than a third of a crop in some places, while some fields do not promise a bale to 50 acres. This condition was brought about by three weeks of showery weather. Considerable damage is reported to half grown bolls, a not unusual development after the weevils have taken the squares. North of Waco to Fort Worth and Dallas, infestation is more spotted, large fields having light infestation, while in small fields near the woods weevils are more numerous. The annual summer migration from heavily infested fields will start about Aug. 10.

Top Crop Damage.

"Dr. Smith says of Central Texas: 'Early planted cotton well fruited and will suffer chiefly top crop damage. However, large number late planted field just beginning to fruit that will suffer heavy damage if August is wet.' Evidently the weevils carry a threat that must be considered. July is the month of infestation, while August is the month of migration, while August is the month of migration and damage. The extent of the injury cannot be determined until a later date.

"While it is perfectly natural to expect a more two-sided market in view of the extent of the advance, we believe the trade will be inclined to take a constructive view of price possibilities on recessions until or unless the menace of heavy damage from the weevil either has been discounted or removed."

Cotton Goods Imports Decline

Imports of specified cotton cloths during the first six months of 1927 show a decline of 4,89,541 square yards as compared with the same period of 1926, according to figures issued by the Department of Commerce.

The total which arrived in the United States, by way of the five principal ports, is 27,887,658 square yards valued at \$6,523,633. These figures compare with 32,577,199 square yards, valued at \$8,132,142, imported in the first half of 1926, and 64,715,200 square yards, valued at \$14,502,421, during the corresponding six months of 1925. The latter quantity is 36,827,542 square yards above the total for this year.

June Imports Higher.

The month of June was not among the months that contributed to this decline, as figures for that month show. June Imports were 4,754,519 square yards, valued at \$1,121,614, as compared with 3,549,586 square yards, valued at \$951,430, for



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the same month in 1926; an increase of 1,204,933 square yards. Last month, however, shows a decline of 1,441,758 square yards from the May total of 6,196,277 square yards.

In both the half yearly and monthly figures, the increase in fine goods imports, as compared with last year, attract particular attention. The popularity of organdies during this season may in part account for this increase. For the six-month period 11,480,603 square yards of what is classed as "lawns, organdies, nainsooks, cambrics and similar fine goods of average yarn number above 40" were brought into the country. This compares with 7,92,275 square yards brought in under the same classification last year. The principal gain is noted in the bleached sub-division.

Shirtings Decline.

The shirting materials, "poplins, broadcloths, madras, oxfords, and other shirtings," appear to be the only large group which accounts for the shrinkage in the total. Receipts of 8,364,671 square yards for the half year show a considerable drop when compared with the 15,819,625 square yards imported in that period last year. Voiles, crepes and ratine are smaller groups which also show declines from last year.

Sateens recorded an increase, the 4,375,641 square yards comparing 3,919,638 square yards for the first half of 1926.

During June, two major divisions, shirtings and fine goods, recorded declines from the previous month, while sateens advanced slightly.

Sales Continue Above Production

"Sustained demand and relatively low prices of raw material have exerted a strong influence on production schedules since the first of the year," according to the Cotton Textile Bulletin, published by the Association of Cotton Textile Merchants of New York. "The aggregate sales for the first half of the year amounted to 1,703,401,000 yards, or 114.5 per cent of production, which was 1,487,387,000 yards.

"In view of the sustained production at high levels it is significant that goods were moving steadily and in large volume into channels of consumption. Stocks declined during the first quarter and from that time have fluctuated within narrow limits at a level somewhat above the low for the year. The volume of stocks on hand June 30 this year was nearly 40 per cent smaller than on the same date last year.

"Shipments as a direct index of consumption reflect a steady and substantial demand for cotton goods since January. During June they represented 96.5 per cent of production and for the six months the ratio to production was 104 per cent, as compared with 97 per cent for the corresponding period last year.

"One of the strongest features of the statistics gathered by the association is the position indicated by unfilled orders. Mills have turned the first half of the year with the largest volume of unfilled yardage in many years. Almost without exception summer months in the past

have been periods of slack business. This year the immediate prospect is different. Summer schedules in mills have been made on the basis of large advance orders for which raw material was purchased several months ago. To this extent the recent advance in the price of raw cotton seems to have been anticipated.

"If so, mills are buying principally for new orders, and in as much as their equipment is booked ahead for production on the average for a period of several weeks purchases for the remainder of the 'old cotton year are likely to be rather light. The pressure of higher costs of raw material has already been felt in the primary market, and in some quarters it is held that if higher levels for raw cotton are maintained some of the competitive advantages which worked for cotton goods as against other materials may disappear.

"With more attention being given to the margin between the price of raw material and the price of cotton cloth and with the healthy condition which sales, shipments, stocks and orders have shown in the aggregate for the first half of the year the primary market has reason to hope for satisfactory progress during the second half of the year."

Watching the Other Fellow Work

(Continued from Page 10)

plenty of laps ahead. I also noticed a fellow going around cleaning the windows in the machines, so as I couldn't figure out what he was doing it for, I had to show my ignorance again and make inquiries, so he informed me that the windows were put in the machines so that the man that ran the machine could see whether the cotton was going on the cages evenly or not, and when the glasses become dirty or stained with oil he couldn't tell without opening the door, which he probably wouldn't do, and if anything happened several laps might be spoiled before the trouble was found and corrected. Quite a good idea, I thought, so when I got back home I raised hell and put everybody to cleaning ours.

Checking Repair Work.

When I left the picker room I went down through the machine shop, as an old acquaintance of mine was the master mechanic. Things were very quiet in this department. In fact, it looked like they were all either out sick or had quit. After awhile I found out different, as I also found Ben on his job. Now, Ben is the master mechanic and the old acquaintance I referred to. Ben is another fellow that doesn't let any grass grow under his feet, as he runs his job instead of letting his job run him. He holds the position as chief engineer also, and is just as much at home when discussing CO2 as he is when giving orders as to how a broken piece should be fixed. I wasn't around there long before I found out why there was such a small amount of repair work going on. A section man from the spinning room came in with a long face and a broken swing gear bearing, but he didn't throw it on the work bench and slide out to the boiler room or blacksmith shop to take a

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smoke, which is the usual plan. I thought they were going to give him the third degree by the way he had to answer questions about that broken bearing. From the conversation that was going on he must have been star fixer in his department. After the excitement was over between him and the machinist, he handed over two job tickets which had to be filled out, one of them went to the office and the other was kept on file. They read:

Department _____
Date _____
Section No. _____
Section Man _____
Name of Part _____
How Broken _____
Time Required to Repair _____
Repaired by _____
Cost to Repair _____
Machine Stopped _____
Machine Started _____
Overseer _____ M. M.

I found out that three records were kept of each piece that got broken or worn out—one for the office, one for the machine shop, and the other in the department where the piece came from. This seemed to be quite a little extra work just for as small a matter as a spinning frame bearing, so I had to get myself made an ass of again by asking questions.

"You see," says Ben, "since we started this system we are using one man less in the shop and the others are not worked to death, as they were when anybody could get anything fixed without asking any questions or giving any reasons. Since we keep a check on all broken or worn parts, everybody is more careful and the machines get the proper oiling. The five or ten minutes required to make out these job tickets is much cheaper than paying a man and furnishing power and wearing out tools." I thought, "Why keep a force of men to cover up carelessness when a little piece of paper can prevent it?"

So I am getting me some job tickets printed and the devil will be to pay when they arrive.

(To Be Continued)

Style Adapting

A new tyranny of style prevails in two senses. Not only are styles more fluid than ever in many things beside dress, but also there is, at least in America, a keener zest to be in style because of greater ability to afford it. All this has affected business in more countries than our own.

The particular instance is that of France. There, as here, the industry most affected has been the textile, with the trend of feminine fashion the one big influence. With the French it is an especially important consideration, in view of the traditional dominance of Paris in style suggestion.

That tradition, however, is apparently not being fully maintained in one respect. Little visible success so far appears to attend a subtle effort to dictate longer skirts. Even a partial success of that sort would mean much more yardage for textile mills.

But the matter in general is also

reciprocal; and with their keen adaptiveness, French manufacturers as well as designers have studied what new impulses might come from consuming markets,—notably the richest of all, America. As noted by a delegation from the American Chamber of Commerce in Paris which has been touring the various plants of northern France, this receptiveness to outside ideas, in the way of either novelty or research, has particularly been shown by the textile manufacturers of that region. Here it is a question of fabrics rather than of modes.

The same thing has been stated in print by these French mill men. One of them has just declared publicly that the French fabric industry has been greatly affected and stimulated by such external influences, beginning with the American desire for novelty and including also a host of ultra-modern developments in general in science or art or invention which may suggest ideas.

The fabrics themselves, woolen or cotton, must meet new requirements by not only being light and soft of touch (in rivalry with the new silks) and vari-colored, but also of a firmness that will keep the required model lines without sagging. For inspiration there is a turning to such diverse sources as aviation, the "movies," electric advertising, radio, light vibration, art theories of form and color, new fibres, etc.

The goal is to catch from these many sources and adapt any feasible new ideas that may permit of a textile translation. Likewise an emphasis on originality of design, with a single large French firm now finding itself required to evolve more than 5,000 new designs each year.

Is there in this example any moral or lesson for American textile enterprise?—Boston News Bureau.

Exports Are Larger

Exports of cotton cloth and of other manufactures of cotton increased both in quantity and in value in June, as compared with the same month last year, according to figures announced by the Department of Commerce. Raw cotton shipments continued their advance.

The figures for June (000 omitted, follow):

Commodity	1926	1927
Raw cotton including linters, bales	346	481
Raw cotton including linters	\$33,936	\$38,240
Cotton manufactures, total	\$10,810	\$10,850
Cotton cloths, total sq. yds.	41,321	48,979
Cotton cloths, total	\$6,122	\$6,489
Tire fabrics, sq. yds.	216	390
Cotton duck, sq. yds.	\$88	\$133
Cotton duck, sq. yds.	1,026	1,473
Cotton duck	\$390	\$433
Other cotton cloths, unbleached, sq. yds.	9,339	10,793
Other cotton cloths, unbleached	\$982	\$947
Bleached, sq. yds.	8,222	7,899
Bleached	\$1,032	\$842
Printed, sq. yds.	7,773	11,029
Printed	\$1,134	\$1,505
Piece dyed, sq. yds.	7,973	9,685
Piece dyed	\$1,421	\$1,517
Yarn dyed, sq. yds.	6,768	7,707
Yarn dyed	\$1,072	\$1,108
Cotton yarn, thread, etc., carded yarn, pounds	1,153	1,120
Carded yarn	\$397	\$391
Combed yarn, pounds	773	811
Combed yarn	\$557	\$684
Sewing crochet, darning, pounds	126	105
Sewing crochet, darning	\$129	\$96
Cotton hosiery, doz. prs.	460	430
Cotton hosiery	\$797	\$675

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Wabena Mills, Lexington, N. C., White Hall Yarn Mills, White Hall, Ga.
Grey Goods, Print Cloths, Twills, Sheetings, Pajama Checks, Arcadia Mills.
Spartanburg, S. C., Clinton Cotton Mills, Clinton, S. C., Hermitage Cotton Mills.
Camden, S. C., Mills Mill, Greenville, S. C., Osage Mfg. Co., Bessemer City, N. C.

Cotton Goods

New York.—Further advances in cotton goods prices were noted during the week. Sales continued moderately large, with the bulk of the orders calling for delivery not later than September. Prices on finished lines, including sheets and pillow cases, flannels, denims, khakis, ginghams, tickings and many more lines were from a quarter of cent to 4 cents a yard higher. The biggest advance was noted on wide sheetings. Advances on ginghams as most of the colored goods were from a half cent to one cent a yard.

There was a steady business in print cloths and sheetings for the bag and converting trades and prices were higher than during the previous week. Most mills on these goods are fully sold for the next six to eight weeks. Some of them have received orders that call for delivery through the end of the year.

The production of cotton goods continues very large but sales have exceeded output and there has been no accumulation of stock. The rise in cotton prices has made it hard for mills to keep prices on a parity with raw material and many of them are refusing forward business at current prices.

Business in print cloths was active at the first of the week, but quiet on Friday and Saturday.

Efforts to find spots of various constructions continued and some very sharp premiums were paid in a few instances. Quotations held unchanged and were just as firm as before, firmer in a few cases. A few large bids were out with mills unwilling listeners, though some of had brought out yardage during the last day or two.

There were smaller sales of 80 squares at 10½c and 72x76s at 9¾c. Bids for September 64x60s were made at 6¾c and October was the earliest available at the price. October 27-inch 64x60s sold at 5¾c and 8.20-yard 5¾c. The best on quick 60x48s was 6¾c, contracts held for 6¾c. October 68x72s were 8¾c, September 8¾c and spots held for 9c.

In sheeting, for 31-inch, 5.00 yard, 7 net was paid for fair quantity. Several held this style at one-quarter higher. For 36-inch, 5.00 yard, 7½ net was paid; 32-inch, 40 squares, 6.25 yard quoted at 5¾ net for contract; 7¾ net paid for 4.70 yard. Business in 37-inch, 48 square, 4.00 yard, at 8½ net was reported—and it was found that most mills hold the better makes of this construction at 8¾ net. For 56x60, 4.00 yard, 9¼ net is quoted for September, with anything for nearer delivery difficult to secure. Business in 5.50 yard was done at 6¾ net; 36-inch, 3.25 yard contract, at 10 net; 36-inch,

3.00 yard, for the better makes, quoted at 10¾ to 11 net; 40-inch, 4.25 yard, at 8 net for contract, and spot quoted at one-quarter higher; 40-inch, 3.75 yard, at 8¾ net, with some quoting slightly higher; 40-inch, 250 yard, at 12 net; 40-inch, 5.00 yard, at 7 net; 40-inch, 5.50 yard, at 6¾ to three-quarters, net, depending upon the count; 40-inch, 3.60 yard, quoted at 10¼ net.

There was a fairly good, general business in various kinds of combed goods during the week. For the 64x48 rayon alpacas, 16½ for the domestic rayon is considered the market for contract; 17¾ for the dobbies, and 21½ for the jacquards.

Contract of 40-inch, 72x68, 9.50 yard combed of 40-inch, 72x68, 9.50 yard combed lawn sold at 10½; 40-inch, 76x72, 9.00 yard spot sold at 10%.

The situation in the tire fabrics section was not particularly active from an inquiry standpoint. There were a few bids for poundage and some few orders placed in the local and out-town market.

The Fall River print cloth market for the week continued rather quiet, with trading in small lots generally the rule. Sales are estimated at 65,000 pieces. Narrow goods continued very scarce and firm with mills asking better prices. The 36-inch business put through also indicated a shortage of these constructions. Moderate trading in 38½-inch numbers was reported with better prices being asked as the week ended.

In the narrow widths, material trading was reported in 25 inch 40x32, 14.75, at 3½, and in 27-inch, 56x52, 9.00, at 5c. Mills were very firm in their ideas and buyers were compelled to meet these ideas before the goods were available. For 27-inch, 64x60, 7.60, 5% was paid. Moderate quantities of 31½-inch, 48 squares, 8.70, at 5¾, and of 31½ inch, 56x52, 7.50, at 5% figured in the week's business. Buyers were bidding 6% for 32-inch, 64x60, 6.50, but the asking price of mills was firm at 7 cents, which buyers did not readily absorb.

Cotton goods prices were as follows:

Print cloths, 28-in., 64x64s...	6½
Print cloths, 38-in., 64x60s...	6
Print cloths, 27-in., 64x64s...	5¾
Gray g'ds, 38½-in., 64x64s...	8
Gray goods, 39-in., 68x72s...	9¾
Gray goods, 39-in., 80x80s...	10½
Brown sheetings, 3-yard...	11
Brown sh'tgs 4-yard., 56x60	9¾
Brown sheetings, stand...	12
Tickings, 8-oz.	19½a21
Denims	16
Staple ginghams, 27-in.	9½
Kid finished cambrics	8 a 9
Dress ginghams	14½a16½

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The Yarn Market

Philadelphia, Pa.—Higher prices and somewhat larger sales were noted in the yarn market during the week. Quotations on many numbers moved up as cotton advanced. Inquiry was very active during the week, but in the majority of cases, buyers took only small amounts for prompt shipment. They were apparently willing to pay full prices for which they have immediate need, but showed little interest in future supplies and the few bids made for forward shipment were lower than spinners would accept. It was true, however, that spinners made fairly good headway in getting yarns towards a basis in keeping with the higher cotton prices, but still have a long way to go in this respect. Dealers and yarn consumers, although they have been considerably upset by the rise in prices, admit that carded yarns are not priced too high, especially in view of the fact that spinners making good quality yarns are paying a much higher price for their cotton. The number of mills which have cheaper cotton on hand is much smaller than a month ago and are unable to replace their supplies except at a very substantial advance.

The best demand for carded yarns continued to come from the knitting trades, although weavers were better buyers than they have been in recent weeks.

Actual sales were small in practically all cases in both combed and mercerized yarns. Buying of gray yarns and warps is reported from the South which indicates higher prices according to the trade. In other words mercerized yarns appear to be going up say these factors if the situation is to be judged by the cotton market. The fact that knitters have not covered to any extent is also a strong factor in summing up the market at the moment. Values are almost entirely unchanged from the last two weeks. Other houses report this branch of the trade as very quiet and say that even inquiry is almost at a standstill since the week opened. Notwithstanding these facts dealers are quite optimistic regarding business for the future and say consumers will regret neglecting to cover until forced to pay higher rates.

Southern Two-ply Skeins.

8s	27 1/2
10s	29 1/2
12s	29 1/2
14s	30 1/2
16s	30 1/2
18s	31
20s	32
24s	34
26s	36
30s	38
40s*	47

Southern Two-ply Warps.

8s	28 1/2
10s	29 1/2
12s	29
14s	29 1/2
16s	31
18s	31 1/2
20s	32
22s	32 1/2
24s	32 1/2
26s	33
30s	34 1/2
40s*	46 1/2

Southern Frame Spun Carded Yarn on Cones—Cotton Hosiery.

8s	28 1/2
10s	28 1/2
12s	29
14s	29 1/2
16s	31
18s	31 1/2
20s	32
22s	32 1/2
24s	32 1/2
26s	33
30s	34 1/2
40s	46

Southern Single Skeins.

4s-8s	28
10s	28 1/2
12s	29 1/2
14s	29 1/2
16s	30
18s	30 1/2
20s	31
22s	31 1/2
24s	34
30s	34 1/2
40s	44 1/2

Southern Single Warps.

4s-8s	28 1/2
10s	29 1/2
12s	29 1/2
14s	30 1/2
18s	31 1/2
20s	32 1/2
24s	34 1/2
30s	36 1/2
40s	46 1/2

Southern Two-ply Comber Peeler Mercerizing.

8s-12s	44
20s	45
30s	49
36s	54
38s	56
40s	57
50s	59
60s	68
70s	78
80s	91

Southern Two-ply Hard Twist Combed Peeler Weaving Yarns.

8s-12s	40 1/2
10s	42 1/2
20s	47 1/2
30s	52 1/2
40s	54 1/2
50s	55 1/2
60s	57 1/2
70s	77 1/2
80s	86 1/2

Two-ply Mercerized Yarn.

20s	62
30s	66
40s	71
50s	78
60s	87
70s	1.01
80s	1.14

Knit Exports for May.

Washington, D. C.—Cotton hosiery was the most valuable item in knit goods exports from the United States during May, the Department of Commerce reports. The total was 417,836 dozen pairs, valued at \$659,997. Silk hosiery was second, 59,670 dozen pairs, valued at \$548,368, being exported.

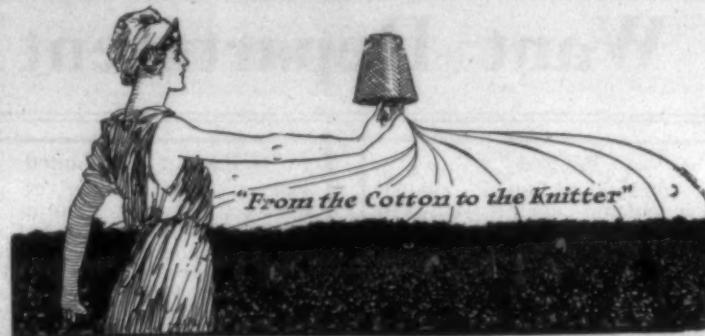
Other totals were: Rayon hosiery, 104,089 dozen pairs, valued at \$352,232; underwear, 46,533, \$151,182; sweaters, 24,255, \$19,250.

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WANT position as overseer spinning in Texas, Ark., La. or Miss. 40 years of age. 20 years experience. Can handle small or large room. No. 5201.

WANT position as Superintendent or overseer weaving; can handle auto fabrics or plain goods. Would consider a good yarn mill. No. 5202.

WANTED by young man 21 years old with good references, position in mill office. Completed High School and the Georgia College of Commerce. Good stenographer and familiar with adding machine. No. 5203.

WANT position as superintendent, overseer carding or overseer spinning. References to anyone interested. No. 5204.

WANT position as overseer carding. 21 years experience on all kinds of work. No. 5205.

WANT position as overseer weaving. Experienced and competent. No. 5206.

WANT position as agent, superintendent or manager, anywhere. No. 5207.

WANT position as overseer carding, spinning, or spooling, twisting and warping. Can give the best of references. No. 5308.

WANT position as superintendent, or as overseer weaving in a large mill. Best of references. No. 5209.

WANT position as overseer weaving. 10 years experience on plain and fancies, cotton or silk. Familiar with Draper, Stafford and Crompton & Knowles looms. Guarantee satisfaction. No. 5201.

WANT position as overseer weaving, wide and narrow sheetings, drills, satins or krinkled bedspreads. 18 years experience in weaving, warping and slashing. No. 5211.

WANT position as overseer cloth room. 20 years experience. Good references. Married and strictly sober. Can change on short notice. No. 5212.

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WANT position as overseer carding, large mill. Fully acquainted with combed and carded work. Best of references. No. 5214.

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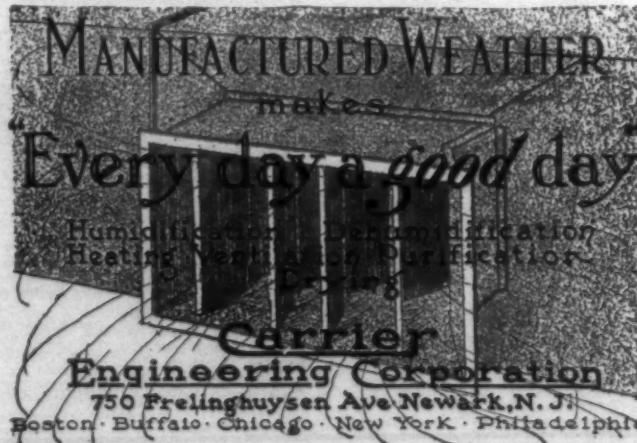
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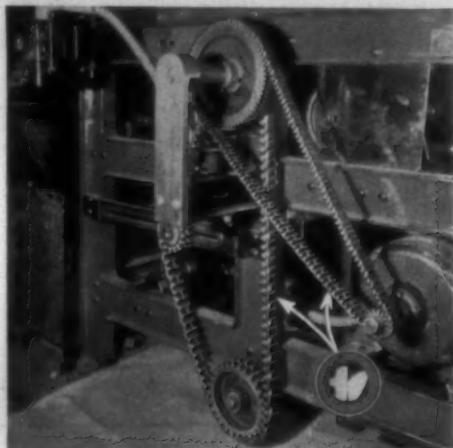
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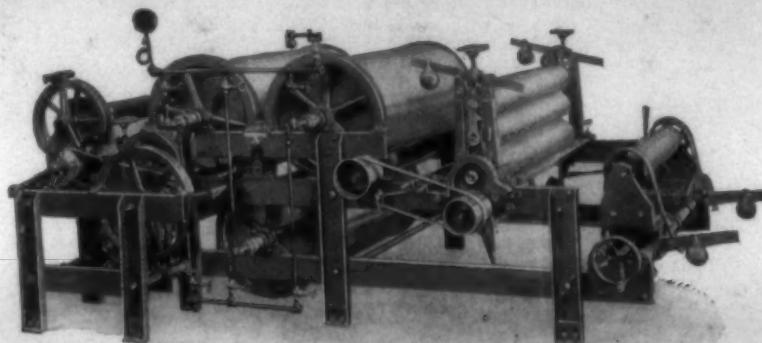
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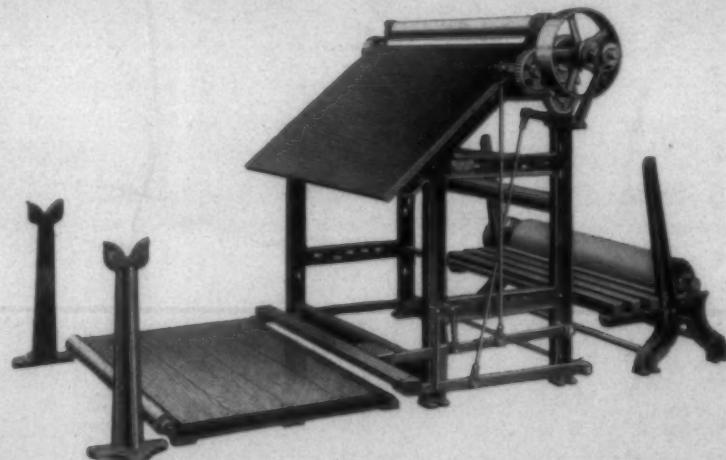
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